

No. 10



E. K. Sellard
Herman Gunter.



PROPERTY OF
FLA. STATE GEOL. SURVEY

Index ed June 18, 1915;
Citrus and Hernando and
Pasco, Counties Gunter &

E. H. Sellards
Herman Gunter
Tallahassee
Fla.

11/5/07

v 7/4/1911

Florida State Geological Survey.

Index

County	Town	Prim. source of water	Other sources	Depth shallow wells	Depth deeper wells	Avg.	Surf. material	Thick. near surface	General water supply	Water formation	Resources.		Citrus Co.		Prob. depth	Quality of water	Injurious decay notes.
											Water supply	Prim. Water beds.	Water supply				
Citrus	Crystal River	2 nd tub. wells	Open wells, streams ponds, springs.	about 4 ft.	F		Sand	Shallow	variable		Pen. limestone	Abundant.		at surface in many instances		Hard water	Tide fluctuations
"	Inverness	Cisterns, open surface wells	Driven wells (2 in) lakes.	about 25 ft.			Sand	variable			Limestone for deep wells					Hard from deep wells with seasons for shallow wells.	
"	Floral City	driven wells, cisterns	Lakes	about 35 ft.	197 ft.		Sand.	variable about 40 ft.	none		Limestone	"				Hard	With seasons
"	Holder	2 nd tub. wells, cistern	Lakes	65 ft.	100 ft.		Sand	70 ft.	"		Limestone	"				Hard	
"	Hernando	Open wells cisterns	Lakes, driven wells.	40 ft.			Sand	-	-		Limestone	-				Hard	
"	Homosassa	Open wells.	River + Cisterns.	5 to 10 ft.			Limestone				Limestone	"				Hard.	

ing water now limestone from 4 ft. at that depth no seasons, but in visited in

County	Town	Topographic Situation of town	Number & kind of privies, cesspools etc.	Disposal of Sewage	General Water Sanitary Cond. of wells usually good	Prevalence of Typhoid etc.
Citrus	Crystal R.	Flat		no sewage system		
"	Inverness	Rolling	Privies used entirely, Pop. 600.			No cases reported for 1907.
"	Florida C.	Hilly				
"	Holder	Rolling				"
"	Herman	Rolling	Privies for each household.			Several cases for 1907 about 5 cases now 11/2/07, one death to-day from fever.
"	Homestead	Flat.	"			

Resources

(Cont'd)

Citrus Co.

Suggested Improvements

References supplementary notes.

Deep wells.

method of obtaining water now is to dig into the limestone from 5 to 10 ft. water supply at that depth is sufficient in some seasons, but wells were very shallow when visited in November, 1907.

Public Supplies

County	Nearest Town or P.O.	Dist. P.O.	Dist. P.O.	S	T	R	Q	Owner	Name of Spring	Character of water	Discharge	Nature of mineral deposits	Temp. flow, seasons.	Bed. formation from which water issues	Nature of passage	Manner of emergence	Nature of stream.
Citrus	Crystal River	S	1/4 mi	-	-	-	-	U.S. Gov. Nas. water	see Plant Springs Crystal River spgs.	Hard	no way to est. all springs at Crystal River estimated = to Blue Spg. of Jacksonville. Say 200. 000 gal. Est. limit of	none	not determined	Pen. limestone, Aligocene. dated	Sol. cavity	Boil.	Stream along 6 miles to the Gulf.

County	Nearest Town or Topographic Surroundings.	Distance from nearest				Possibilities of pollution.	Springs.		Uses. (Contd)
		Cas. pool	House	Barn	Privie		So spring muddy after rains	Drinking, Public, Domestic etc.	
Citrus	Crystal Low. Smearfy	-	near	-	near	overflowed tide	-	See manufacture	

Citrus Co.						
Trade name of water.	Improvements at Spring.	Amt. shipped.	Price	Remarks.		
	Ice plant.	—	—	Ice plant uses these springs for water, amount used unnoticable, from 66,000 to about 140,000 daily.		

County	Nearest Town or P.O.	Nearest P.O.	Dist. R.O.	S	T	R	Q	Owner	Driller and Address	Type of well	Date sunk	Elev. above sea	Depth	Diam.	Length of casing	Depth of Prim. supply	Depth of Second supply	Geol. formation in which well stands	Geol. source of supply	Head	Yield	Spec. Descr.	
Citrus	Citronelle		near					Knight & Holder	? Oliver, ? Va.	Driven		26 to 30 ft.	75 ft.	2 in	Entire	75 ft.			limestone			none reported	see no of water
"	Crystal River	S	1/4 mi					Oxford Crater Co	Owners.	"	1901	4 ft	47 ft.	2 in	"	75 "	From 5 to 25 ft.		"	- 4 ft.			
"	"	S	1 1/2 mi					W. H. Espey	E. H. McElvane, Crystal River	"	1906		90 ft	2 in	"								
"	"							C. E. Herrick															
"	Lecanto	N.	1 mi					H. Allen	Owner	Driven	1906		60 ft.	2 in	"	60 ft.							d drilled well
"	"	near	near					C. Horn	Walter Allen, Lecanto	"	1906		80 "	2 in	"								red.
"	"	N.	1 mi					W. A. Allen	Owner	"	1902		97 "	2 in	97 ft.	97 ft.	variable			- 89 ft.			
"	"	NW	2 "					P. L. Allen	H. E. McElvane, Crystal River	"	1907		125 "	2 in		125 ft.				- 105 "			
"	Hernando	SW	4 "					Chas. Wolfe	W. A. Allen, Lecanto	"	1907		98 1/2 "	2 in	88 1/2 ft.	98 1/2 ft.	About 50 ft.			- 82 "			
"	Inverness	N	1 1/4 "					Mutual Mining Co.	Jack Edson, Inverness	Drilled	1907	abt. 75 ft.	127 "	10 in	44 ft.	127 ft.				- 47 "			one got lime
"	"							"	Edson, Inverness	"	"	75 ft	124 "	"	40 "	124 "				- 47 "			
"	"	SW	3/8 mi					J. B. Henley	Joe Robertson, Floral City	Driven	1907	?	72 "	2 in	Entire	72 "	About 50 ft.			- 45 "			
"	"	N	250 yds					H. W. De Munro	"	"	"	?	67 "	2 in	60 ft.	67 "	40 ft.			- 45 "			
"	"	SW	1/6 mi					West Coffee Co.	? Bryan ?	Drilled	1900	60 to 70 ft	98 "	4 in	Entire	90 "				- 34 "			
"	Floral City	N	near					C. S. Bohannon	Joe Robertson, Floral City	Driven	1907	abt. 70 ft.	66 "	2 in	"	66 "	40 ft.			- 31 "			
"	"	SW	3/4 mi					Camp Phos. Co.	Owner	Drilled	1906		110 "	10 in	40 ft. Pk 3 ft	110 "	40 "			- 41 "		with secom	now 1/10/07
"	"	N	1 "					Brady Phos. Co.	A. C. Johnson, Floral City	"	1901		148 "	8 in	50 ft.	138 "	40 "			- 35 "			
"	"	N	1 1/4 "					Benton Phos. Co.	"	"	1905		130 "	2 in	125 ft.	130 "	about 40 ft			- 40 "			
"	"	"	"					"	"	"	"		147 "	2 in	142 "	147 "	"			- 40 "			

Locality	15	Distance from nearest				Are clay beds present?	Will proper casing be required?	Is well probably polluted?	Uses.
		House	Pine	Bam	Pool				
min. character of water.									
Lime water		near		150 yds.			Yes.	no.	Turpentine still
Lime "		"					Yes	no	Crate mill purposes
		"							
Lime water		"					Yes	no	Grail household
		"							not in use
Lime water		"		near			Yes	no	Household & stock
"		"		"			Yes	no	" "
"		40 yds	-	-	-		"	"	Household & stock
"		near					"	"	Phosphate mining
Sulphur		"					"	"	" "
Lime		-	-	-	-		"	"	Household & stock
Lime		near					-	-	" "
Lime		near					-	-	Saw mill purposes
Lime		near	near	near			-	-	Hotel purposes
Lime (slight)		near					"	"	Phosphate mining
Lime-sulphur		near					"	"	" "
Lime		near					"	"	" "
Lime		"					"	"	Drinking for employees.

(Cont'd)		Citrus Co.		Remarks.
action	driller	Does it corrode casing	Suggestions	
Incorrupt.		no.		Well was unsuccessful, struck no rock and found no supply of water at this (90 ft) depth. abandoned.
				Well in quick sand and driller could not penetrate same; well choked by it and abandoned.
Incorrupt.				This well about 6 ft. from one listed above, in the one they got lime water - the other sulphur.
Incorrupt.				
#				
"				
"				This well reported to 5 ft. lower now 10/1/07 than this time last year.
"				

[illegible]

County	Mineral Character of water.	Distance from House	near barn	from nearest well	are protected by clay beds	will probably be polluted	will probably be polluted	Wells.	Uses.	action in boilers	Could it corrode casing	Citrus Co.	Remarks.
Citrus	Lime	near				yes	no	Phosphate mining		does not scale.	no.		
"	Lime	near				"	"	"		Incrusts			
"	Lime	near	near			"	-	Livery stable purposes					
"	Lime	near	near			"	100	Devil household					
"	Lime	near				"	100	Turpentine still purposes	Incrusts				
"	Lime	near				"	"	Phosphate mining	Incrusts.				
"	Lime	near				"	"	"		not.			
"	+ Almost soft.	near				"	"	"					
"	Lime	near				"	"	"					
"	+ Hard sulphur	"				"	"	"		Slight incrust.			
"	"	"				"	"	"					
"	Soft. ?	Near				-	-	Devil. purposes.					
"	Lime	Near	Near	Near		-	-	Devil & town supply.					
"	Lime	Near	Near			"	"	Household & stock					
"	Lime	"				"	"	Phosphate mining	Incrusts				
"	Lime	"				"	"	"	"	"			
"	Lime	"			No	"	"	"	"	"			
"	Lime	"			"	"	"	"	"	No bad incrust.			
"	Lime	-			"	"	"	"	"				
"	Lime	Near	Near	-	Near	"	"	Devil household & stock					

County	nearest Town or P.O.	Dist. P.O.	Dist. P.O.	STRA	Owner	Driller and address	Type of well	Date sunk	Elev. above sea.
Citrus	Dunnellon	S	2 mi		Camp Phos. Co.	Jas O. Edson, Dunnellon	Drilled	1904	
Citrus	Dunnellon	S 1/2	2 1/2 "		" " "	Allen Gary, Dunnellon	"	1905	
"	Dunnellon	S	1 1/2 "		J. G. Rhodes & Co.	? ?	"	19?	

Wells

Citrus Co.

Depth	Diam	Length of casing	Depth of Prim. Supply	Depth of Second. bed. formation in supplies. which well stands.	Depth of Prim. Supply	Head	Yield	Spec. or Desc.
265 ft.	12 in	116 ft.	265 ft.	116 ft.		- 81 ft.	-	-
162 ft.	12 in	124 ft.	162 ft.	—		- 94 "	-	-
102 "	2 in	102 "	102 ft.			?		

County	Nearest Town	Mineral character of water.	Distance from nearest House or spring	Prime	Dam	Is clay bed present	Is well properly cased?	Is well probably polluted?	Wells. Uses.
Citrus	On Line		Near			No.	Yes.	No.	Phosphate mining.
Citrus	On Line		Near			Yes	Yes	No	Phosphate mining.
"	On Line		Near			—	Yes	No	Turpentine stilling

Action in bores	Does it corrode casing?	Suggestions	Remarks -
Immersed slightly	No.		Open pit 76 ft. deep.
" "	No.		Open pit 84 ft. deep.
" "	No.		Open pit 82 ft. deep.

Topography Citrus Co.:-

From Dunnellon (Marion Co) to Citronelle, the general topography is rolling, soil very sandy, no outcropping clay observed. After leaving Dunnellon one mile or so, no surface ponds observed with but very few exceptions, showing no evidence of a clay sub-soil.

From Citronelle to Crystal River the topography is not so decidedly rolling, however, the ponds are still few. Limestone approaches surface and crops out (at surface) about 2 mi. from Crystal River where the well was sunk for oil. Limestone also occurs on surface at Crystal River.

No springs reported in this ~~reported~~ area. Springs occurs in abundance in Crystal River, the whole river is fed entirely by springs - so reported.

From Crystal River to Homosassa the topography has a rolling tendency for about 3 miles with ponds occasionally. From this point the "low" flat woods are encountered with numerous cypress ponds. Limestone at surface in several places on the road.

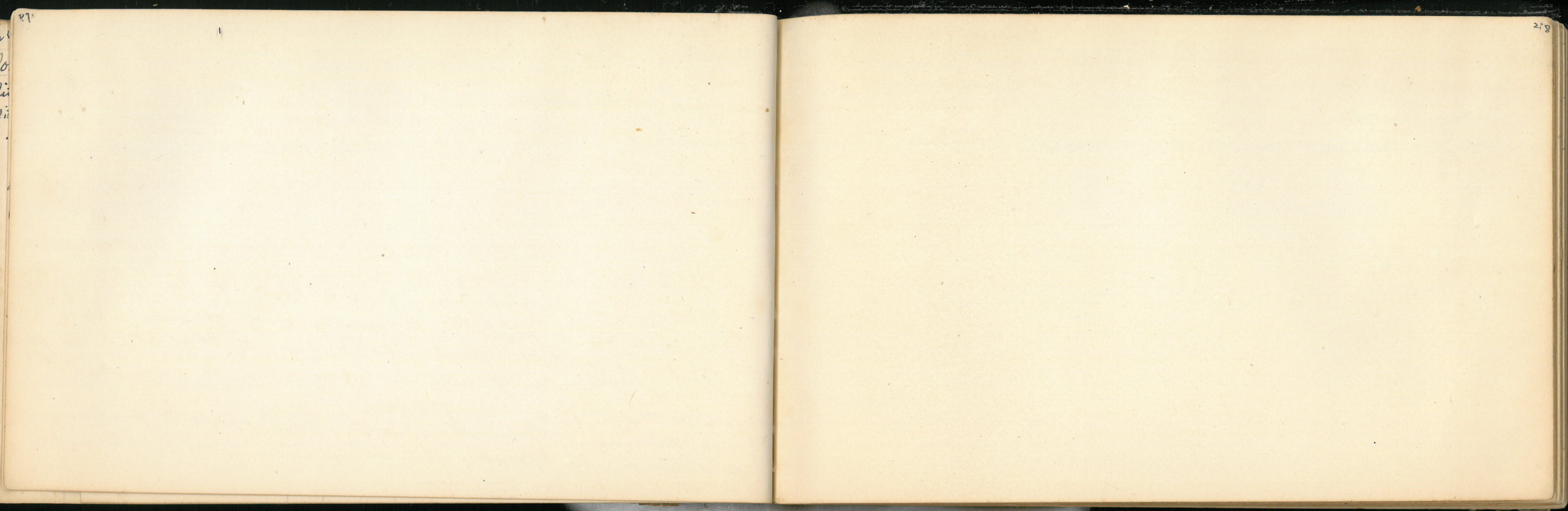
From Homosassa to Lecanto the topography is flat with numerous cypress ponds for the first four miles, after which it has a rolling nature

26
with but few ponds. Approaching Lecanto the rolling nature becomes decidedly more hilly, and very dry no surface ponds of any consequence. Rock exposed in several places around Lecanto. Some instances down in the "valley" streams & ponds were noticed.

From Lecanto to Inverness the topography is hilly, with clay about 5 ft. below surface. No streams or ponds noticed at all along the route.

From Inverness to Floral City the topography is hilly for about two miles after which it becomes more rolling. Ponds and lakes occur. The area has the appearance of a phosphate area. Around Floral City it is hilly.

From Floral City to Etna the topography is in general rolling with but an occasional pond. about 4 mi. N. Floral City 6 mi. pond occurs much of the order of parairie. From Etna to Inverness the surface is still of a rolling nature. From Inverness to Dunnellon is the large phosphate producing area of Florida. The topography still rolling with lakes for about the first 6 or 8 miles from Inverness.



General Water Resources										
County	Town	Prim. source of water	Other sources.	Depth shallow wells	Depth deeper wells	Avg. Surf. material	Thick-ness	Water supply	Surf. formation	
Hernando	Brooksville	Wells	Springs.	10 to 20 ft.	226 ft.	Sand	Thin	Fair	Clay.	
"	Crook	Wells		1	75 ft.	Sand	Variable	Little	Limestone	
"	Bay Port	Shallow wells	—	20 ft.	—	Sand	"	Fair	—	

Hernando Co.

Water supply	Prim. water beds	Water supply	Prob. depths	Quality of water	Incr. or decr. notes.
Good	Pen. Limestone	Abundant	125 to 300 ft.	Hard	With seasons.
Abundant	" "	"	50 to 100 "	"	" "
—	—	—	—	—	—

County	Town	Topog. situation of town	General Water Resources			
			Number and kind of privies - cesspools etc.	Disposal of sewage.	Sanitary condition of wells.	Prevalence of typhoid fever etc.
Hernando	Brown Hill		Many	no system	Good	not prevalent
"	Brown Rolling		Several	" "	"	" "
"	Bay Level		"	" "	_____	" "

Suggested improvements	References supplementary notes.
Sewage system	Note page #

32 Springs.									
County	nearest town or P.O.	Direct P.O.	Dist. P.O.	S	T	R	Q	Owner.	Name of Spring
Hernando	Bay Port	S/E	8 mi					Wilder + McClure Elgin, Ill.	McKewachee
"	"	N/E	2 mi					L. D. Varn	Sulphur Spring
Character of water									
Hard									
Discharge									
Est. 100,000 per min.									
Est. 10,000 gal. per min.									

Hernando Co.									
Nature of mineral deposits	Temp.	variations of flow - seasons.	Bed. formation from which water comes	Nature of passage	manner of emergence	Nature of stream			
None	78°	not determined	Pen. limestone	Sol. cavity	Boil	Confined to channel 12 miles to Gulf.			
—	—	—	—	—	Boil	Enters inlet from Gulf.			

46.

County	nearest town or P.O.	Direct. P.O.	Dist. P.O.	S	T	R	Q	Owner	Driller and address.	Type of well	Date sunk	Elev. above sea
Hernando	Brooksville	S.	1/8 mi					Brooksville Ice and Cold Storage Co.	R. J. Allen, Lakeland	Drilled	1905	Elev. 126 ft.
"	"	S.W.	1/8"					Hopkins Bros. and Darlington. (Incorp.)	" " " "	Drilled	1906	Elev. 126 ft.
"	"	E	1 1/2"					Mercer-Muller Lumber Co.	" " " "	"	1901	
"	"	E.	2 1/5"					L. B. Varn,	" " " "	Drilled	1907	on till level.
"	Croom	—	Near					A.C.L. R.R.	R. J. Allen, Lakeland	"	—	
"	Terrell	—	Near					Tampa-Havana Lumber Co.	Powell, Tampa	"	1907	

Wells.

Hernando Co.

Depth	Diameter	Length casing	Depth of Prim. supply	Depth of Second. supply	Bed. formation in which well stands.	Geol. source of supply	Head - 25'	Yield -	Inch or less
170 ft.	8 in						- 25'	-	Same as Dept.
226 ft.	8 in	79 ft.	226 ft.		Pen. limestone		- 108 ft		
80 ft.	4 in	80 ft.	80 ft.		" "		- ?		over layer 50 ft.
176 "	6 1/2 in						- 126 ft		and Lime Co.
70 "	8 in				Pen. limestone	" "	- 14 ft	14,000 gals. day	to softer
280 ft.	6 in				"	"	- 5 ft.		

37	39								
County	near town	Mineral Charact. of water	Distance nearest House	are day	Is well properly used.	Is well protected?	Uses.		
Hernando	Brook		2nd House		Yes.	No.	See manufacture		
"	"	Lime water.	Near		Yes.	No.	Saw mill purposes.		
"	"	Lime	Near		Yes	No	Saw mill purposes.		
"	"	"	"	N.	Yes	-	Household.		
"	Cro. Hard		Near	Near	No	No	For R.R. boiler use		
"	Terr. Lime		Near		Yes	No	Saw mill purposes.		

Cont'd.		Hernando Co.	
Action in boilers	Does it corrode casing	Depth to rock.	Suggestions
no incrustation of any consequence.	—	—	Remarks - Elevation estimated same as Dept. See note page - 45.
Incrusts.	—	—	
Incrusts Badly	—	—	50 ft. to rock. Flint rock layer 100 ft. 6 in well to 100 ft.
Corrodes -	—	—	Line from Standard Line Co. Kendrick, Fla., used to soften water.
Incrusts	—	—	

County

Nearest Town or P.O. Dist. P.O. P.O.

ST R Q

Owner

Driller and address

Wells.

Type of well Date sunk

Elev. above sea.

Hernando Co.

Depth

Diam.

Length of casing

Depth of prim. supply

Depth of second. supply

Bed. formation in which well stands.

Geol. source of supply.

Head

Yield

Inc. or Decr.

County

Red
or

Mineral char. of water

Distance nearest
Crossed River

Born

House

Is clay

Is well

Is well

Is well

Is well

Is well

Is well

Is well

Is well

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Wells.

Uses.

Contd.

Hernando Co.

Action in boilers

Does it
corrode casing?

Is it
to rock

Suggestions

Remarks.

The following information furnished by Mr. O. W. Reagan, Agent of Hooper Bros. + Darlington.

#1 A strata of what appeared to be ochre was passed through about 60 ft. below the surface and between that depth and 71 ft., there was a strata which seemed to be kaolin.

"At the depth of 79 ft., a strata of rock was struck at which point Mr. Allen stopped the driving of the outside casing.

"The cavity or stream from which the supply of water is obtained, seems to be about 2 1/2 ft. in depth."

Analysis, Office State Chemist, B. H. Bridges, Analyst.

Total solids 273.00 parts per million. Reported to be as follows

CO ₂	abundant.
CaO	"
SO ₄	Trace
MgO	"
Cl	Present in moderate amount.
Al ₂ O ₃ + Fe ₂ O ₃	Absent.
Organic matter	"

Note. (1 gr. = 17.1 parts per million)

Sample of water from Verkinvachee Springs, ten miles west of Brooksville, Hernando County, Fla. Analysis made by N. P. Pratt Laboratory, Atlanta, Georgia, March 12, 1904. Analysis for Tripeka Saw Mills No. 22923.

Incrusting Constituents		Grains per U.S. Gallon	Equals parts per million
5	Silica	.3964	6.77844
4	Peroxide of iron + alumina	Trace	Trace
4	Carbonate of lime	7.0050	119.7855
3	Sulphate of lime	.2724	4.65804
2	Carbonate of magnesia	.7060	12.0726
Non-incrusting Constituents.			
3	Magnesium chloride	None	None
4	Magnesium sulphate	1.1476	19.62396
1	Calcium chloride	.3828	6.54388
2	Sodium chloride	.1690	2.8899
5	Sodium sulphate	.0070	.1197
Total Solids by evaporation			13.2924 = 227.80004

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General Water

County	Town	Principal Source of water	Other sources	Depth shallow wells	Depth deep wells	Avg.	Surf. material	Thick-ness	Water Supply	Surface formation
Pasco.	Lacoochee	Wells		10 to 30 ft	90 ft.		Sand	variable	Some	Clay.
"	Hudson	Cisterns	Wells, Ponds, Spgs	5 to 10 ft.	—	—	Sand & limestone	"	"	clay, limestone
"	Givay	Deep wells	Ponds.	—	46 to 120 ft.		Sand	"	"	" "
"	Odesa	Open dug wells, Deep wells, ponds.		10 to 20 ft.	104"		"	"	Depends on seasons.	clay.
"	Ehren	" " "	" " "	10 to 15 ft	150 ft		"	"	"	"
"	Dade City	Wells			55 ft		Sand	"	Fair	"
"	St. Leo.	Wells,	Spring, lakes.		45 ft		Sand	"	"	clay
"	San Antonio	"	" , "		165"		"	"	"	"

Resources.

Water Supply	Prim. water Beds	Water Supply.	Prob. depths.	Quality of water	Incr or Decr. with season	any notes.
Some	Limestone	abundant	60 to 100 ft.	Hard	—	
"	—	—	—	Variable	—	
"	Limestone	—	—	Hard	—	
"	—	—	—	Surface water soft.	" "	
"	Limestone	"	—	" " "	" "	
"	Limestone	"	40 to 100 ft.	Hard.	" "	
"	Limestone	"	—	Hard	" "	
"	"	"	—	"	" "	

Pasco Co.

County	Town	Topog. situation of town	Number and kind of privies, cess pools etc.	Disposal of sewage.	General Water Sanitary condition of wells.	Prevalence of typhoid etc.
Pasco.	Lacoo Rolling		Several	no sewage system	Fair	Not noted
"	Hua Flat.		"	"	"	Not prevalent
"	Tivay Flat, with cypress ponds.		"	"	Poor.	many cases during year '07
"	Odes Flat.		"	"	Fair	
"	Ehre Flat		"	"	"	Not prevalent.
"	Bade Hilly		"	"	"	"
"	St. Hilly		Few	"	Good	"
"	San "		Several	"	"	"

Resonances,	Pasco Co. Cont'd.	References to supplementary notes.
Suggested improvements.		Note page - x
		" " x
	Better sanitary conditions around wells.	" " x
Sewage System.		

County	nearest Town or P.O.	Drain P.O.	Dist P.O.	Owner -	birth + address -	Type of well	Date sunk	Elev. Sea.
Pasco.	Trilby	S	Near.	A.C.L. R.R.	H.A.J. Prescott, Trilby	Drain	1907	
"	Sumterville	—	Near	City, Sumterville	B.F. Smith, Oxford.	"	1895	
"	"	S	2 mi			Drilled		
"	"	"	"			"		

Wells -

Pasco Co. -			Depth.	Drain	Length casing	Depth Prim - supply.	Depth. second supply.	Geol. formation in which well stands.	Geol. source of supply.	Head	Yield	55 Incr Decr.
			31 ft.	10 in	Pit 12 ft. Pipe 19 "	31 ft.	—	—	Limestone	- 5 ft.	—	—
			86 ft.	1 1/2 in	—	86 ft.	—	—	"	- 21 "	—	—
			2001 ft.	10 in	—				"	- 5 "	—	—
			—	12 in	—				"	- 8 "	—	—

analysis page

County	no To	Distance House	nearest Cen Barn	the days present.	Is well prop- erty cased -	Is well prob- ably polluted	Wells - Uses.
Pasco.	Mineral Chen - water						
"	Hard -	near	—	Yes.	Yes.	No.	R.R. Boilers use.
"	Sur "	"	near	Thin Bed.	"	"	General -
"		Remote		Yes.	—	"	Abandoned -
"		"	"	"	—	"	"
"		"	"	"	—	"	"

Antid - Does it corrode casing	Depth to rock.	Pasco Co. Suggestions	Remarks.
Action in Boilers			
—	Abt. 30 ft.	—	See note page.
—	Two feet.	—	Sample taken, see analysis page.
—	—	—	Oil well.
—	—	—	" "

County	Nearest Town or P.O.	Direct Dist. P.O.	Dist. P.O.	STR	Owner
Pasco.	Hudson		near		
"	Ehrew		N 1/2 2 mi		

Sumter	Sumterville	N	3/4 mi		D. L. Belton
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Springe.

Name of Spring	Character of water Lime ?	Discharge.
		50 gal. min. Est.
Branch Mill Spg.	Lime Hard	20,500 gal. per minute.

Nature of min. deposits	Temp.	variations of flow - seasons	Geol. formation in which it stands.	Nature of passage	manner of emergence	Nature of stream.
None		-	Limestone	Sol. cavity	Boil	Enters Gulf of Mex.
"		-			Seepage	makes very small stream
Sumter Co.						
None		With seasons	Ocala limestone	Sol. cov.	Boil	Flows to Withlacoochee River.

56	60					Springs		
County	near Town	Topographic surroundings.	Distance nearest				Possibilities of pollution	So spring muddy after rains
			Cess pool	House	Barn	Privy		
Pasco.	Hus	Hammocky	near	near	near	near	Tide fluctuation, flood spring.	yes.
"	Ed	Swampy	-	-	-	-	-	-
Sumter	Sum	Rolling, rocky	-	Remote	-	-	None.	after excess rains.
							Runs a mill	

Pasco Co.					61
Trade name of water	Cont'd. Improvements of spring	Amount shipped	Price	Remarks.	
-	No improvements	-	-		
-	Yes	-	-		
road	Dam and mill	road	-	note page 94	

62		Wells.										Pasco Co.										63	65
County	nearest Town or P.O.	Direct P.O.	Dist P.O.	STRQ	Owner	Driller and Address	Type of well	Date	Elev. above sea.	Depth	Diam.	Length casing	Depth Prim. supply	Depth Second supply	bed. formation in which well stands	bed. source of supply	Head	Yield	Drill or Deer.				
Pasco	Lacoochee	Near	Near		Chas. Jensen	Owner.	Driven	1906.		90 ft.	2 in	90 ft.	90 ft.				10 to 15 ft.	100 gals min.	with season	on base.			
"	Dade City	5/8	1/2 mi		Muller and Jinsser	Sparkman, Dade City	Drilled	1903?	About 88 ft.	45 ft.	6 in	45 ft.	45 ft.				15 to 17 ft.						
"	"	"	"		"	"	"	1903?	"	55 "	4 in						15 to 17 ft.						
"	Fivay	3/4	near		Aripaka Dr. Wells	J.O. Edson, Duncannon	"	1904.		96 "	6 in	40 ft.	96 ft.				6 ft.						
"	"	"	"		"	"	"	"	"	120 "	"	"	120 ft.				8 "						
"	St. Leo.				J.F. Corrigan	"	Driven	?		40 "	2 in	40 ft.	40 ft.		Pen. limestone		25 ft.						
"	Euclid	E	1/4 mi		Norman Wells & Co.	"	?			147 "	6 in	30 ft.	147 "		" " ?	same limestone	14 "		none reported	the water is used still.			
"	Port Neches	N	4 "		Stubbs Bros & Co.	R.G. Allen, Lakeland.	Drilled	1906	Est. about same as depth 57 ft.	104 "	4 in	35 ft.					11 "						
"	Odessa		Near		Gulf Pine Co.	J.G. Zimmerman, Duncannon	"	1907	" 90 ft	104 "	4 in	35 ft.											
"	Elwren		Near		Gulf Cypress Lbr Co		"	1906	" 110 "	150 "	3 in	all	260 ft				30 ft.			rocks, mostly			
"	Pasco.		Near		S.S. Goffin		"	1901	" 110 "	260 "	3 in	all	270 "				25 ft.						
"	San Antonio	S	Near		J.S. Flanagan		"	1902	165 "	65 "	2 in	"	65 "				25 "						
"	"	"	"		"	Wanchula	"	1903		165 "	2 in	Passcock					8 "			cores when the owner attempts to pump			
"	"	5/8	5 mi		"	H.A. Sparkman, Dade City	"	1906		85 "	5 in	82 ft.	85 ft.				25 "						
"	"	N	near		Convent	"	"	1906		98 "	2 in	98 "	98 ft?				28 "						
"	St. Leo	5/8	near		St. Leo College	Owner	"	1905		75 "	2 in	63 ft.	75 ft.				32 ft.						

62	64	Wells.										65
County	Town	Mineral Character water	Distance from Pines	nearest House	on clay Barn	is well prop- only each.	is well prob- ably polluted	Uses.	Action in Boilers	Cont'd. Does it corrode casing	Pasco Co. Suggestions.	Remarks.
Pasco	Laco.	Hard.	near	near	near	yes.	NO	Household -	corrodes			Cost of drilling \$, 65 per foot. Firm is Glade City Ice works. Very unsanitary location.
"	Gate	"	"	"	"	"	"	Ice manufacture	corrodes			
"	"	"	"	"	"	"	"	"	"			
"	Five	" iron.	—	Near	Near	"	"	Drinking & to fill an "artificial" pond.	mounts			This firm uses water out of sink for use in turpentine still. The water incrusts boilers. The well noted is used for general purposes around the still.
"	"	" 2	—	Near	Near	"	"	"	"			
"	St. i	"										
"	Line		near	near	near	yes.	"	Drinking & stock.				Did not penetrate much rock, mostly sand and clay.
"	Port Line			near	near	NO.	"	Turpentine still purposes.				
"	Old Line		near	near	near	yes.	"	Saw mill purposes.				
"	Elv Line			near		—	"	Drinking supply.				This well was not properly cased when first drilled and has given the owner considerable trouble. Owner contemplates drilling deeper in order to stop well from caving in.
"	Pas Line		near	near	+	yes.	"	Saw mill purposes	corrodes badly			
"	Sun & Slight lime			near	near	yes	"	General " Stock				
"	"	"		"	"	"	"	"				
"	"	Hard		"	"	NO.	"	Irrigation				
"	"	"		"	"	yes?	"	Convent supply.				
"	St. a	Slight lime		"	"	yes	yes	For use around shop.				

County	Nearst Town or P.O.	Direct Dist. P.O.	Dist. P.O.	STRA	Owner.	Driller and Address.	Type of well	Date sunk.	Elev above sea.	Depth	Diam.	Length casing	Depth Prim. supply	Depth second supplies	Geol. formation in which well stands	Geol. source of supply.	Head	Yield	Incr Decr
Pasco	St. Leo.		near		St. Leo College	Owners.	Bored	1900	-	67 ft.	2 in	66 ft (3 in casing)	67 ft.	-	limestone	-	-20 ft.	-	-
"	"		"		Dr. J. F. Corrigan	Owner.	"	1900	abt. 191 ft.	75 "	3 in	71 ft.	73 ft.	-	"	-	-32 "	-	-
"	Pasadena	S/W	"		Nichols	Goodal & Dayton,	Driven	-	-	80 "	2 in	all	80 "	-	"	limestone	-70 "	-	-
"	Herdon	N	1/4 mi		James Herndon	"	Bored	1899	-	102 "	2 in	"	102 "	-	"	"	-20 "	-	-
"	"		Near		Hobbs & Wells.	-	"	1900	-	106 "	2 in	"	106 "	-	"	"	-56 "	-	-
"	"				"	-	"	-	-	-	5 in	-	-	-	"	"	-36 "	-	-
"	Abbott	N	1/8 mi		J. L. Abbott	-	"	-	-	-	-	-	-	-	"	"	-30 "	-	-
"	Richland	-	near		A.C.L. R.R.	Allen & Barr, Lakeland	"	1898.	-	90 ft.	8 in	-	-	-	"	"	-	-	-
"	Dade City	S/E	1 1/2 mi		Sunnybrook Tob. Co.	M. S. Howard, Dade City	"	1907.	-	157 "	2 in	entire	-	-	-	-	-	-	-
"	"	"	"		" " " "	" " " "	"	1907.	-	90 "	2 in	75 ft.	75 ft.	-	limestone	limestone	-20 ft.	-	-
"	"	"	"		" " " "	" " " "	"	"	-	70 "	4 1/2 in	61 ft.	70 ft.	-	"	"	-26 ft?	-	-
"	"	"	"		" " " "	" " " "	"	"	-	45 "	6 in	40 ft.	43 ft.	-	-	-	-13 "	-	-
"	"	"	"		Dade City Vegetable Co	" " " "	"	"	-	87 "	4 1/2 in	-	-	-	limestone	limestone	-18 "	-	-
"	"	"	2 mi.		W. H. Coleman	" " " "	"	"	-	120 "	2 in	56 ft.	119 ft.	-	"	"	-60 "	-	-
"	"	S/W	1/4 "		Jim Ingram	" " " "	"	"	-	100 "	2 in	100 ft.	100 "	-	"	"	-60 "	-	-
"	"	"	"		School house	" " " "	"	"	-	53 "	2 in	50 ft	53 "	none	"	"	-30 or 35 "	-	-
"	"	near near	"		Dade City	W. A. Sparkman	Driven	1905-	-	74 "	2 in	55 ft + no water	-	-	"	"	-	-	-
"	"	north	1/4 mi		Henry Cray	" " " "	"	1906	-	31 "	10 in	all	31 ft.	-	"	"	-5 ft.	-	-
"	Tribby	S	near		A.C.L. R.R.	W. A. G. Prescott, Tribby	Bored	1907	-	-	-	-	-	-	"	"	-	-	-

County	Nearest Town	Min. Character of water	Distance nearest cypress	Distance nearest Home Dam	are clay beds present	is well prop. uly eased	is well prob- ably polluted.	Uses.	Return in Cycles	Does it corrode casing	Suggestions	Remarks.
Pasco.	St. Le.	Line	-	Near	Yes.	Yes	No	Supply of college.	-	-	-	Hot air engine.
"	"	"	-	-	Yes.	"	"	General household.	-	-	See analysis page 76	Wind mill. Rock begins at 69 ft. and continues for 4 ft at which point a 2 ft. cavity was struck.
"	Pasada	"	-	Near	"	"	"	Still supply.	Inconstr	yes	-	mill moved away. Well abandoned
"	Herd	"	-	-	"	"	"	Saw mill purposes	"	-	-	18 foot pit at bottom of which engine is placed.
"	"	"	-	Near	-	"	"	Serpentine still	"	-	well in 18 ft. pit.	
"	"	"	-	-	-	-	-	"	-	-	-	
"	Abbot	"	-	"	-	-	-	R.R. boiler use.	-	-	-	Well stands in 4 1/2 foot cavity.
"	Richla	" (slight)	-	"	-	-	-	Unsuccessful.	-	-	-	See Note page #75
"	Dade	-	-	-	No	-	-	-	-	-	-	
"	"	Line ?	-	-	Yes.	Yes	No.	General saw mill purposes.	-	-	-	Pump lowered 10 feet in a pit. See note page #75. No
"	"	"	-	-	"	"	"	Household use	-	-	-	Struck a shell limestone at a depth of 60 ft. Coral rock also reported by driller.
"	"	Soft. ? ?	-	-	"	"	"	Irrigation. Boiler use.	-	-	-	No rock, very sticky yellow clay.
"	"	Line	-	-	-	"	"	"	-	-	-	Struck limestone at 40 or 45 ft.
"	"	"	-	-	-	"	"	Household.	-	-	-	Shelly rock at 40 ft., solid rock (phosphate) at depth of 50 ft. cavity 119 ft.
"	"	"	-	Near	-	"	"	Drinking.	-	-	-	No rock until within 8 in of bottom, only a 6 in cavity.
"	"	"	-	-	yes	yes	-	Public	-	-	See Analysis p -	
"	"	"	-	near	"	near	"	-	-	-	See note p - 74	
"	Trill	Line	-	"	"	"	"	R.R. boiler use	-	-	" " " - 70	

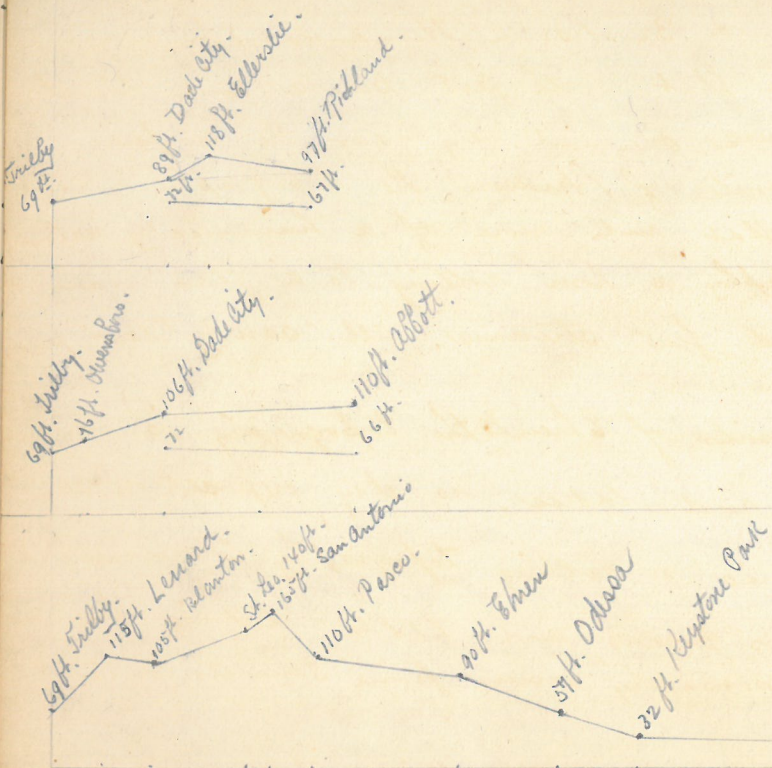
Note on well A.C.L. R.L. Trinity, Fla.:

Surface elevation estimated 10 ft. lower than that of depot. Pit 21 feet square and well flows and fills pit up to within 5 ft. surface. Flow has been estimated at 500 gals. min. The pump can not lower beyond $3\frac{1}{2}$ feet below the common level. Struck rotten limestone near bottom of well through which pipe or casing was driven.

Clay depths at Lacoochee are extremely variable. At one locality a well was dug 22 ft. encountering quick sand only; This well was abandoned and a second well started 75 feet distant, at This locality clay was encountered a few feet from surface.

Water problem at Hudson is quite a serious one just at This time. The main source of supply is cisterns and during This continued drought the supply in ~~these~~ has almost given out. The shallow well water is not good for drinking purposes since it is colored, by as a usual rule, by the various roots, palmetto and others, hence not good to drink. The "natural" wells fluctuate ^{with tide} as do the other surface wells, but as a usual rule in the "natural" wells, the water is brackish. The open dug wells are in sand and clay and are not usually brackish. The spring there occurs where the rise and fall of the tide floods it and hence not used for any purpose whatsoever. Limestone occurs at surface around the town and surrounding Hammock.

Wells at Friday are located at head of big cypress pond and several privies are close by. Surface around well is covered with water and taken as a whole wells are in a very unhealthy and unsanitary location. Several cases typhoid during this present year '07.



a.c.L.

S. a. L.

a.c.L.

144 ft. 10 pm Day.

Topography Pasco Co.

1st From Brooksville to Hudson.

After leaving the hilly country around Brooksville, (Hernando Co) for about 2 miles, the topography becomes almost flat with few ponds and limestone sinks. At Enville the limestone occurs on and very near the surface. Between Enville and within some two miles of Hudson the topography is more rolling, but nearing Hudson becomes flat and more of a hammocky nature. From Hudson to Odessa the topography is from rolling to a flat nature with numerous cypress ponds and few streams. All sandy "low" pine woods.

From Odessa to within about two miles of Ehren the topography is very flat with numerous cypress ponds and lakes. No clay exposed on surface. Nearing Ehren and to San Antonio a rolling topography is encountered with a disappearance of the cypress ponds, and lakes taking the predominance. Much the same topography occurs from San Antonio to Dade City.

From Dade City to Abbott the topography is in general rolling with many ponds. 1 1/2 mi. S. Pasadena Long prairie occurs. About 3 miles N of Abbott a high sandy ridge is encountered, with no lakes or ponds, very dry.

Well of Henry Gray, Dade City - This well is known as the blowing well. When seen at 2 P.M. on a warm day the air was coming out through the pipe with considerable force. At 8 P.M. the following evening, outside temperature being 59°, the air was entering the well with an appreciable current. Well stands on hill and does not reach deep enough to pass the permanent water level. It ends, according to report, in a crevice in the lime-stone. It seems probable, therefore, that it connects with dry cavities in the lime stone above water level. The currents of air passing in and out are apparently due to changing conditions in the atmosphere.

Mr. Howard made two more unsuccessful attempts close by the one well listed. The wells, not recorded, were 235 ft and 52 ft., deep respectively. Quicksand commenced about 10 feet below the surface, and continued as far as the deepest boring (235 ft) was made. No cavities were encountered and this quicksand seemed to become finer, so fine that the driller could not make no progress and finally had to abandon same, changing to another location, a short distance away, where other conditions were found.

Log of successful well given by Mr. M.S. Howard:-

- 1st 8 feet - common sand.
- 8 ft. to 35 ft. - yellow clay.
- 35 ft. to 40 ft. - Quicksand.
- 40 " to 75 " - clay. ?
- 75 " " 90 " - cavity.

Analysis of Dr. J. J. Corrigan's well, St. Leo, Fla. by A. W. Blair, Chemist
State Experiment Station, Gainesville, Fla.

Total Solids	136.00	pts	per	mil.
Cl	8.50	"	"	"
Hardness	93.06	"	"	"
Nitrates	.87	"	"	"
Nitrites	none			
Free NH_3	none			
Albuminoid NH_3	none.			

On igniting residue no change.

An examination of residue shows Sodium and Lime.

Reaction decidedly alkaline.

County	Town	Prim. Source of water	Other sources	General		Avg.	Water		Surf. formation
				Depth shallow wells	Depth deeper wells		Thick-ness	Water supply	
Sumpter	Coleman	wells	—	20 to 40	100 ft.		sand	1-5 ft.	clays?
Sumpter	Sumterville	wells	none	—	30-100		sand	variable	little limestone
"	Hebster	Wells.	—	10 to 40 ft.	132 ft.		Limestone & Sand.	"	Some
"	Butter Hill	"	—	"	85.		Sand	"	"
"	Wildwood	"	Springs	"	—		Sand	"	Fair

Resources.

Sumter Co.

Water supply.	Prim. water beds	Water supply.	Prob. depths	Quality water.	Iron or Deer.
Good abundant	Perm. limestone	abundant		Hard. lime.	With seasons
"	"	"	30-100 ft.	Hard.	"
"	"	"	50-135 ft.	"	"
"	"	"	40-100 ft.	"	"

County	To Topog. situation of town	Number and kind of drains, cesspools, etc.	Disposal of sewage	General Water Sanitary conditions of well	Prevalence of Typhoid etc.
Sumpter	level	many	no system	good	not prevalent
"	Rolling	Many	no system	good	" "
"	H. Level	"	" "	"	" "
"	On Slightly rolling	"	" "	"	" "
"	H. Level	"	" "	Fair	" "

Resources. cont'd Sumter Co.

Suggested improvements.

References & Notes.

Some clay present.

" " "

Some clay present.

Springs.

County	nearest Town or P.O.	Dir. P.O.	Dist. P.O.	STRA	Owner	Name of Spring	Character of water	Discharge
Sumpter	Coleman	E	2 1/2 mi		C. C. Hurd	Warm springs	lime water	

Sumter Co.

Nature of min. deposits	Temp.	variations of flows - seasons	Geol. formation from which spg. comes -	Nature of passage	manner of emergence -	Nature of stream
			Rev. river line			

Springs.

County	near Town	Topographic surroundings.	Distance nearest				possibilities of pollution	Is spring muddy after rains.	Uses.
			Cess pool	House	River	Barn			

Sanjojo Co

Cont'd

Sumter Co.

Trade name of water.	Improvements at Spring	amount shipped	Price	Remarks.
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none

County	nearest Town or P.O.	Diner P.O.	Dial P.O.	STRG	Owner	Driller and Address	Type of well	Date sunk	Elev. above sea.
Sumter	McBister	-	near		J. W. Fussell	C. L. Eaddy, Linden	driven	1905	abt. 89 ft.
"	"	-	"		" " "	" " "	"	"	"
"	"	N.	2 P.O.s		S. S. Hattkins	J. H. Robbins, Webster	"	1907	" 89 ft.
"	"	S/E	near		J. W. Kimbrough	C. L. Eaddy, Linden	"	1906	"
"	"	N	1/8 mi		W. B. Kimbrough	" " "	"	1907	abt. 89 ft.
"	"	"	"		" " "	J. H. Robbins, Center Hill	"	1907	" " "
"	Center Hill	-	near		Smith & Goodale	" " "	"	"	" 91 ft.
"	"	-	"		Venable & Hardness	J. H. Robbins, Center Hill	"	1906	" 93 "
"	"	-	"		F. D. Smith	" " "	"	1906	" 91 ft.
"	"	-	"		J. W. Smith	F. D. Smith, Center Hill	"	1905	" 92 or 3 ft.
"	"	-	"		F. D. Smith	Owner	"	1905	"
"	"	N	3/8 mi		R. H. Buel	Owner	"	1901	"
"	"	"	2 1/2 mi		Imm Buel	D. L. Sprathling, Bushnell?	"	1899	"
"	"	"	2 mi		Joseph Borton	manvel, ?	drilled	1901	abt. 99 ft.
"	Okahumpka	-	near		Coleman	"	"	1906	" 60 ft.
"	Coleman	N	1/2 mi		Coleman Cypress Co	"	"	"	"

Wells.

Sumter Co.						87	89		
Depth	Diam.	Length casing.	Depth Prim. supply	Depth Second. supply.	Geol. formation in which well stands	Geol. source of supply	Head	Yield	Water Deer.
132 ft.	2 in	130 ft.	130 ft.	—	Limestone	limestone	-8 ft.	—	Season
72 ft.	2 in	—	—	—	"	"	-7 ft.	—	"
68 "	1 1/4 in	50 ft.	68 ft.	—	"	"	—	—	"
109 "	1 1/4 in	—	—	—	"	"	-6 ft.	—	"
42 "	"	40 ft.	—	—	"	"	-5 ft.	—	"
50 "	4 in	30 ft.	—	—	"	"	-10 ft.	—	"
45 "	2 in	—	—	—	"	"	-14 ft.	—	"
55 ft.	4 in	40 ft.	—	—	limestone	limestone	-10 ft.	—	"
55 "	1 1/4 in	45 ft.	55 ft.	—	—	—	-14 ft.	—	"
" "	3 in	—	—	—	—	—	-17 "	—	"
85 ft.	2 in	55 ft.	—	—	limestone	limestone	-16 "	—	"
32 ft.	2 in	30 ft.	32 ft.	—	—	—	—	—	"
54 "	2 in	—	—	—	—	—	—	—	"
110 ft.	6 in	All	110 ft.	—	limestone	"	-27 ft.	—	"
225 ft.	6 in	"	225 "	—	—	—	-6 ft.	—	"

86		88		Distance nearest			Are clay	Is well prop.	Is well prob-	Uses -
County	nearest	Min. character water	House	Carpenter	Prinia	Barn	Reds present	only eased.	ably polluted	
Sumter	Ne	Line	Near	-	-	-	Yes.	yes.	No	Public use for drinking + stock
"	"	"	"	-	-	-	-	"	"	Irrigation.
"	"	"	"	-	Near	Near	Yes.	"	"	Household.
"	"	"	"	-	"	"	"	"	"	"
"	"	"	"	-	"	"	"	"	"	"
"	"	"	"	-	-	-	"	"	"	Irrigation.
"	"	Case Soft.?	"	-	-	-	-	"	"	Public service.
"	"	"	"	-	-	-	-	"	"	Irrigation.
"	"	"	"	-	Near	Near	Yes	"	"	Stock for stock.
"	"	" Slight line	"	-	-	-	-	"	"	Irrigation.
"	"	"	"	-	-	-	"	"	"	"
"	"	"	"	-	-	-	"	"	"	Household.
"	"	"	"	-	Near	Near	Yes	"	"	"
"	"	"	"	-	-	-	"	"	"	"
"	"	" Some iron.	"	-	-	-	"	"	"	Hotel purposes.
"	"	OK Hard	"	-	"	"	"	"	"	Saw mill and
"	"	"	"	-	"	"	-	"	"	General purposes.

Contd.		Sumter Co.		Remarks-
Action in boilers	Does it corrode casing	Depth to rock?	Suggestions	
_____	_____			
_____	_____			
_____	_____			
_____	_____			
Some soft scale	_____			Sample taken. Gasoline engine. Sample taken.

Branch Mill Spring. Sumterville, Fla.

The dam is built across this spring, the water can be made to rise six feet but not higher, at this height it supplies 29 h.p. The direction of movement of underground water is from the east. The spring is affected by rain, the water in surrounding wells and sinks stands at the level of the spring, and is affected by the variation of the water level in the spring. When the water is allowed to flow out of the mill pond, lowering spring about 6 feet, the water in the wells is reported to be lowered an equal amount.

The eastern side of Sumter county has clay and sand on the surface - no rock. The surface drainage is to the west. A ridge of limestone rock extends north and south through the county occupying the west side of the county and east to a line through center hill. 2 mi east of Sumterville, post Adamsville.

The surface drainage in flowing west upon reaching this rock country disappears becoming underground drainage. This water reappears as springs along the west side of the ridge.

