

Correspondence - J.A.M. Robinson. 1930-1941

Thwaites, F. T. (Fredrik Turville), 1883-1961 [s.l.]: [s.n.], 1930-1941

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FILE Well No. 3, Geneva, Illinois.

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J. ALBERT M. ROBINSON CONSULTING ENGINEER 228 NORTH LA SALLE STREET CHICAGO

CENTRAL 9129

March 5, 1931

Prof. F. T. Thwaites, Science Hall, University of Wisconsin, Madison, Wisconsin.

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In connection with subject at upper left, I would like to talk to you further, as I must report fully and at once.

About noon tomorrow, my assistant and I are leaving here for Ft. Atkinson, in connection with work there for the Water Commission. We will be at the Black Hawk Hotel there.

I am wondering if we could run over to Madison in the evening, or make an appointment with you for Saturday, preferably afternoon, in the Science Hall.

Will you please give this some thought, and I will telephone to you from Ft. Atkinson, probably about 6:00 PM at your home.

March 7, 1931

Mr. J. Albert M. Robinson, 228 No. La Salle St., Chicago, Illinois

Dear Mr. Robinson:

In reply to your request of last night I give herewith my opinion on the casing off of the Maquoketa (Richmond) shale in Geneva, Ill., No. 3.

The Richmond or Maqueketa shale consists of soft clay-like bluish gray shale which contains considerable finely divided dolomite and a number of beds of soft shaly blue dolomite. It is absolutely necessary to case off the entire formation to prevent (a) muddy water and (b) filling of the hole by caving. Of these the first is caused by the rush of water against the sides of the hole. In this well this is made more serious by the fact that the pump is placed in the shale formation and there the hole is constricted with resulting high water velocity. _aving takes place in two ways: (a) falls of chunks of the firmer portions of the shale formation and (b) by plastic flow into the hole. By no means should one risk setting an expensive pump where it may soon happen that it cannot be pulled on account of one or both kinds of caving. At Waukesha, Wisconsin, they one tried to operate wells without casing off the shale but had nothing but trouble and milky water. Casing is an economy in the long run. Now that no shoulder was left to hold this pipe it will have to rest on some kind of wall packer but even with this added expense which could have been avoided in planning the well, the installation of casing is justified from the standpoint of economy. It is my opinion that the well will not be satisfactory without casing from about 200 feet to somewhere J. A. M. R. , 2

below 305 where the packer can rest on firm rock below the shale. If the well is not cased nothing but trouble can be expected. Some day it will probably be necessary to deepen this well and when this day arrives the casing will have prevented filling of the lower part of the hole.

Very truly yours,

Geologist in charge of well records

June 1.4, 1941.

Mr. Fred Omndson, R. F. B. 2, Detroit Lakes, Minnesota

Door Mr. Orundson:

Thank you for yours of June 11 with money order for \$42.40 covering \$35.00 principal, \$5.40 refund of insurance, and \$2.00 interest on overdue principal. This takes care of all principal for 1940.

It will be all right to make the 1941 payments whenever you are able to.

We have also had a lot of rain but it was needed because May was a very dry month. Let's hope this will be a good season for prices seem to be better now.

Bost regards,

Sinceroly,

In opentide Jake Jancet. Robinson Tuday he might expect at muniter Indiava Csite of munster is Wside of Highland How formation lay Caveloutic condition

Separately what he Highland Parkall. Cheap water, Does not have to bepue. for orrigation, Phoned Monday nete at 8:55

April 15, 1931

Mr. J. Albert M. Robinson, 228 N. LaSalle St., Chicago, Illinois

Dear Mr. Robinson:

In reply to your telephone request given to Mrs. Thwaites while I was on my annual field trip to Devils Lake last Monday I have little information about Highland Park, Illinois. Anderson's report states that the city supply is from the Lake but mentions several fair wells in the Niagara.

It would seem to me that any irregation project would not stand the expense of pumping from a deep well as the overhead and pumping costs would both be very high. I have no reports of gravel wells but would suggest some test holes to look for gravel. So many drillers have cased off gravel water in the past that one is never sure but that some good supplies were passed up.

I do not look with any confidence on the reserves of the Miagara after the extremely dry weather of the last year.

It has been reported to me that Folkman Brothers of Morton Grave had considerable trouble with the water from the deep well which Gray drilled some years ago. I know that Bob Lents worked on this hole for some time making tests with a packer but that the last I heard they were using pond water for their plants and the well water only for the boilers. This makes another argument against a deep well.

All I can say is to drill to the base of the Niagara and hope that you will have good luck, that is in event you find no water-bearing gravel.

Very truly yours.

April 15, 1931

Mr. J. Albert M. Robinson, 228 N. La Sallo St., Chicago, Illinois

Dear Mr. Robinson:

In reply to your tolephone request given to Mrs. Thwaites during my annual trip to Devils Lake I made a study of underground water conditions at Highlands, Indiana about a year ago. This work was at expense of Mr. F. M. Gray, Jr. who ten had a water guarantee contract with the city of Highlands. Since this contract has been terminated I think I can give you some of the general results.

I found that the city was supplied from wells in the Niagara dolomite but that the supply was small. Some screen wells had formerly been used but had given out. An oil test was being drilled at the east end of town.

I recommended testing out the locality of the old screen wells. Later Mr. Gray informed me that he found gravel at this location but that it proved dry. He drilled deeper into the rock and then abandoned the job.

Last fall one of Cater's men informed me that they got 100 g.p.m. from a rock well in the east end of town. I advocated byying the oil test hele and plugging back to the bottom of the St. Peter at 1200. I do not know what was done with this hele but Mr. Gray said it was abandoned with a plugged hele in the Mt. Simon which here has salt water.

I had a theory that the beach ridges of Lake Chicago, one of which passes through Highlands may overlie old beaches formed proor to the last glaciation. Not having seen samples from the dry test I do not know how this theory worked out but if these gravels are dry then the theory would not help.

Water in shallow wells rises nearly to the surface but stands quite deep in deep wells. It is reported at 150 feet in the test hole.

Not knowing the quanity of water needed I find it hard to advise you. If amount is moderate I would try the Nigara but if more you will have to go to the St. Poter. I fear that deeper formations probably have salt water although information from the oil well was not definite. The above information should apply to Munster, Indiana

Very truly yours

J. ALBERT M. ROBINSON CONSULTING ENGINEER 228 NORTH LA SALLE STREET CHICAGO

CENTRAL 9129

June 9th, 1931.

RE: Elkhorn Light & Water Commission

Prof. F. T. Thwaites, Geologist, in charge Well Records. University of Wisconsin, Madison, Wisconsin.

Dear Professor:-

You have been most kind in aiding me in connection with the above and I am going to ask a further favor of you.

Next Friday night there will be a special meeting of the Commission to frame a resolution to the City Council for authority to drill a new deep well and to deepen the present well. In order to make this matter strong enough. I would like to have you write me, in duplicate, a letter setting forth in brief form the facts concerning the present well as to the formations encountered, and which failed to be reached in depth, stating the advisability of drilling into the Mt. Simon Sandstone. It would be well to explain in your letter that at the time when the present well was drilled, little was known about the fact that the EauClaire is a dry or non-productive formation, but that just beneath it the best producer would be found.

Also, I would like to have you attach to each letter a print of your geological classification covering the 1,310' well.

Please accept my thanks for this aid and with kind personal regards, I am,

Yours very traily,

CC Mr. Frank Gates, Mgr., Elkhorn, Wisconsin.

JAMR.S

Juno 11, 1931

Hr. J. Albort H. Robinson. 225 North Lobello 53., Chicego, Illinois

Door Mr. Robinson:

In reply to your requests over the telephone and by letter of June 3th the geological formations penetrated in the deeper of the two deep wells at Elkhorn, Miscensin are shown in attached blueprints. Flease note that there were made a long time age before the present forpation names were in use. There was little accurate knowledge of the deep formations in castors Micconsin at that time, 1916. With this in mind I give a revised log herewich. This mess Depth, foot

Classel drift, till overlying send	1.40	140	
Richmond shale	285	325	
Colona and Block Mayor dolonation	310	635	
St. Poter sendstone and songlemerate (eave)	85	720	
No perplo	-	735	
Lovor Mernesien dolomito(Predrio du Chica)	145	850	
Nasonanto condotono	60	910	
Drosbach sendotono	135	1045	
Een Clairo phale and fine grained senistone	265	2320	

On a nover edition of the blue print(of which I have no estra printo) the information is given that originally water lowered from 177 to 234 feet when pumping 400 gepen.

Insportion of the above log shows that it is not normede as it was based on samples taken every 15 feet. Revertheless, it denoustrates several important things. First, the St. Fotor is thin and suggides little vator. Second, the Broobach sandstone is the only important source of water as the 365 feet of drilling below is charge all in sandstone which is too fine grained to give much water.

To get more under two courses are open. First, the old wells may be closed out and the better water-bouring strong abob. Second, one or more wells may be drilled to the Mt. Simon (second Potedan) conditions which underlied the Sen Claire formation.

In order to judge of the probable success of deeper wells I looked up the records of the nearest wells which seach the He. Since. These are at Delayen and at Union Grove. The first is reported as striking pro-Gentrian quarkaties at 1070 but the whitter is not convinced on this point. "hey found 335 foot of Ean Giniro sendstone and shale. The record is not bolichle having been node up from southered complet taken at irregaler intervale. The Union Group well found 370 feet of New Claire formation and went only 165 foot into the Me. Simon. It is a 10 inch hele in the deeper formations. The record is good but shows no course conditions in the seell part of the Mt. Simon which was penetrated. Now around Beloit the Mt. Simon produces much water. Good wells up to more than 2000 feet deep have been completed in the Mt. Simon at Racine and to the southeest in Illinois. A few wells which are over 8000 feet deep found salt water but that is easily guarded against. Water above the salt zene is good. Water is found in the Mt. Simon in irregular leas shaped beds of coarse candetone. It is impossible to tell at just what depth such a layer will be found but there is every reason to think that one or more would be found at Mthere reaching 200 feet.

I recommend drilling a doop well rather than shooting the old wells for several reasons. First, the old wells have no accurate record and therefore the packag of shots would be largely a guess. Second, there is no accurate record of casing, at least in our filed. Third, the casing is old and shooting might injure it. Fourth, shooting often causes so much loose sand that the well soon fills up to the level of the shot and then gives leas water than before. Shooting undeubtedly can do much in increasing production if it is done carefully and is done in fairly firm rock. In soft rock it can easily ruin a well.

Outry to the fact that I am not now going to the effice but once a day and have to type letters in the versings the time is so short that I as souding two copies of this letter to you at Elkhorn. These have the only two blueprints I could get on short matice.

Vory truly yours.

Geologist in charge of well records

Juno 11, 1931

Maria Mir. J. Albort M. Robinson, 238 Horth Leselle St., Chicogo, Illinois

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Inspection of the above log shows that it is not accurate as it was based on samples taken every 15 feet. Nevertheless, it demonstrates several important things. First, the St. Poter is thin and supplies little water. Second, the Drosbach sandstone is the only important source of water as the 365 feet of drilling below is almost all in sandstone which is too fine grained to give much water.

To get more water two courses are open. First, the old wells may be cleaned out and the better water-bearing strets shot. Second, one or more wells may be drilled to the Mt. Simon (second Potsdam) sandstone which underlies the New Claire formation.

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I recommend drilling a deep well rather than shooting the old wells for several reasons. First, the old wells have no accurate record and therefore the pacing of shots would be largely a guess. Second, there is no accurate record of casing, at least in our filed. Third, the casing is old and shooting night injure it. Fourth, shooting often causes so much loose sand that the well soon fills up to the lovel of the shot and then gives less vator than before. Shooting undoubtedly can do much in increasing production if it is done carefully and is done in fairly firm rock. In soft rock it can easily ruin a well.

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Very truly yours,

Geologist in charge of well records

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July 25, 1931

Mr. J. Albert M. Robinson, 228 North La Salle St., Chicago, Illinois

Dear Mr. Robinson:

Enclosed please find blue print logs of the Union Grove and Jofferson wells promisied when you were here last week. Sorry there was so much delay in getting the blue prints made.

I seem to keep busy although not working!

With best regards,

Very truly yours,

Geologist in charge of well records, Wisconsin Geological Survey

April 24, 1930

Mr. J. Albert M. Robinson, 228 North La Salle St., Chicago, Illinois Dear Mr. Robinson:

In reply to yours of the 22nd in respect to the increase in capacity of wells for the Bowman Dairy Company at Brocklyn I would not try a deep well until I had exhausted the possibilities of the surface deposits. Brocklyn is situated right on the main terminal moreine of the last glaciation. East of the tracks you will find glacial drift and boulders and on the west gravel and sand washed outfromthe glaciar. I do not recall just where the plant is situated but wonder if a gravel well well might not be made in the surface deposits which would be cheaper to pump than would a deep well. I expect that a deep well would be very similar to that at Evansville. If you desire I could run down to Brooklyn and see what information I could dig up on which to base a final conclusion.

Very truly yours,

F. T. Thwaites, Geologist



CENTRAL 9129

April 22nd, 1930

Prof. F. T. Thwaites, Geologist, Science Hall, University of Wisconsin, Madison, Wisconsin.

RE: Bowman Dairy Company, Brooklyn Plant

Dear Professor:

For client above I have been investigating the present wells which are apparently about 150 ft. to 160 ft. in depth drilled into St. Peter Sandstone, the top of the Sandstone being about 90 ft. below ground surface. According to my investigation at Evansville the St. Peter Sandstone is not very thick in this district.

We are trying to obtain about 300 GPM more than we now have and I am wondering what you can tell me about the formations at this point.

In replying please write separately on this subject on account of filing.

Thanking you, I am,

Very truly yours, Albertubliond.

JAMR.S

CENTRAL 9129

April 22nd, 1930

Prof. F. T. Thwaites, Geologist, Science Hall, University of Wisconsin, Madison, Wisconsin.

RE: Bowman Dairy Company Janesville Plant

Dear Professor:

For client above I am investigating the possibility of obtaining a safe water supply as the old well has become contaminated. As I understand it, it is possible to drill into the St. Peter Sandstone and obtain a good supply without going very deep.

Will you please advise me fully and on this subject alone on account of filing.

Thanking you, I am,

Very traly yours,

April 24, 1930

Mr. J. Albert M. Robinson, 228 North La Salle St., Chicago, Illinois Dear Mr. Robinson:

In reply to yours of the 22% in regard to the Bowman Dairy Company well at Janesville I do not recall where the plant is situated. If east of the river the formation is nearly everywhere send and gravel. There contamination of a well would almost undoubtedly be due to some structural defect in the well itsself. Depth to rock is very great in some places and the Cambrian sendstones are the top rock. West of the river the drift is thin and a considerable thickness of Platteville limestone overlies the St. Poter sendstone. Here contamination might be charged to water increvices of the limestone. Reconstruction of a well so as to cement off all the limestone formation might be necessary. Without knowing more about conditions and the location of the well I can do no more. The St. Peter sendstone occurs at and below river level.

Very truly yours,

F. T. Thwaites, Geologist

apy of Thwaites notes on Machols Thills Plant wellsent 8 - 7-30. AMT J. ALBERT M. ROBINSON CONSULTING ENGINEER 228 North La Salle Street CHICAGO

CENTRAL 9129

November 5th, 1930

Prof. F. T. Thwaites, Science Hall, University of Wisconsin, Madison, Wisconsin.

Dear Professor:

Since your letter of October 17th concerning wells at Oconto, Wisconsin I have not heard from you and have been hoping daily to get some information on this subject. The cross section you sent me helps but does not give as much data as I need.

Thanking you for anything further that you can tell me at this time, I am,

Yours very/truly,

Albert Mohime.

Nov. 6, 1930

Mr. J. Albert M. Robinson, 228 North 4a Salle St., Chicago, Illinois

Pear Mr. Robinson:

In reply to yours of Nov. 5 I had a letter from Louis Faust saying that they have never drilled at Oconto. ^The drilling has mostly been done by the water company and under the circumstances it seems likely that they would not want to give much information. I would plan to shut off the top limestone at least. There may be no true St. Peter sandstone since it is absent at Green Bay and Peshtige. Most wells find several stray sands in the Prairie du Ghien formation. Most of the production comes from the Mazomanie and Dresbach sandstones. No troublesome caving places are found so far as I know. I am sure you could get a good well but would not try to drill to the granite as it is reported that the water near the bottom of the sandstones is poor. I am sorry that I can give no more information but could do little under the circumstances.

Very truly yours,

Geologist in charge of well records

J. ALBERT M. ROBINSON CONSULTING ENGINEER 228 NORTH LA SALLE STREET CHICAGO

CENTRAL 9129

October 15, 1930

Re: Bowman Dairy Company, Oconto, Wis.

Prof. F. T. Thwaites, Science Hall, Univ. of Wis.. Madison, Wisconsin.

Dear Professor,

Concerning a good supply of water, I visited the above plant - formerly Murphy-Ward - and would like to inquire of you concerning the formations and what you know about the whole situation. I could get little information from the Water Company in town, but did find that their wells range in depth from about 300 to 600 feet, the former not flowing into the reservoir, and the latter flowing somewhat thereto. I assume that the formation under the limestone is Dresbach, and the limestone seems to be about 30 to 40 feet from surface. We need about 100 GPM, and it is my hope that we can get it without too much expense. As the water rates are very high, we want to cut off from City supply, but keep this under your hat.

farW, JSlogs of his wells are in the office of a Mr. Sam Hart, Consulting Engineer, Gay Building, Madison, and should i become necessary to secure information from him by appli to his office, please bear in mind that discretion must be used, as I do not want it to become public knowledge The Superintendent of the Water Company told me that the Consulting Engineer, Gay Building, Madison, and should it become necessary to secure information from him by application that we have any such plan in mind. So far, I am investigating the present wells of the Dairy plant to see why they are not alike in performance - but cannot get any records on them at all.

> Thanking you for your usual promptness, which will not be forgotten, I am

Yours very truly,

JAMR/s

Oct. 17, 1930

Mr. J. Albert, M. Robinson, 228 No. La Salle St., Chicago, Illinois Dear Mr. Robinson:

In reply to yours of the 15th which came yesterday we have no satisfactory logs of wells at Oconto. Apparently the Water Company has never been willing to give out much information. As I am now back on the pay roll of the State Survey I would not be allowed to give out logs of private wells such as these even if I did have them. Under the circumstances I do not feel like visiting Mr. Hartt just at present. Possibly I will have a student working on well logs in which case I can send him. I will, however, write the Fausts at Kaukauna for I think they worked on these wells and may have logs in their notebooks. The best that I can do is to enclose a comparative cross section which passes through Oconto. On this section the top of the St. Peter is shown as a straight line. I think this lies about 100 feet below the surface at Oconto judging from Weidmans report. There should be no trouble in getting 100 g.p.m. if you use ain air lift or deep well pump. I was called to Marinette once to see how they could get more water and found a centrifugal pump installed several feet above the top of the well. An air lift fixed them so they had plenty of water. I will write if I can get more information.

Very truly yours,

Geologist in charge of well records

Sept. 30, 1931

Nr. J. Albert M. Robinson, 228 North La Salle St., Chicago, Illinois

Dear Mr. Robinson:

In reply to your two letters of Sept. 29 in re Des Plaines and Jefferson will say that I will be glad to have you call on me at either of the times mentioned. In the meantime I will gather what information I can. I think that your idea to drill north of Des Flaines is correct.

Very truly yours,

J. ALBERT M. ROBINSON Consulting Engineer 228 North La Salle Street Chicago

CENTRAL 9129

September 29th, 1931.

RE: City of Ft. Atkinson, Wisconsin.

Prof. F. T. Thwaites, Science Hall, University of Wisconsin, Madison, Wisconsin.

Dear Prof. Thwaites:

On the 22nd inst. the City Council of Ft. Atkinson instructed me to proceed at once with preparation of specifications for a new deep well and we are trying to get these specifications out by October 10th for receipt of bids on October 23rd.

I want to talk to you about the geological conditions there as there seems to be very little information on the subject except that we know that there is a drift of 250' and believe there is a limestone cap, probably Mendota, just under the drift, but I have no information except the log of the Jefferson well, which was sent me a few months ago by you. One of the wells at Ft. Atkinson is about 750' deep but the one at the Park Plant is 800'. I do not know that either was drilled to the Pre-Cambrian.

It is possible, in fact very likely, that I will have to attend the Council meeting at Ft. Atkinson next Tuesday evening, October 6th, and am wondering if it would be convenient to you for me to see you either during that day or the following morning, and in the mean time gather together such data as you can.

With kind personal regards and thanking you for your usually prompt attention, I am,

Yours very truly,

J. ALBERT M. ROBINSON Consulting Engineer 228 North La Salle Street Chicago

CENTRAL 9129

September 29th, 1931.

RE: City of Des Plaines, Illinois.

Prof. F. T. Thwaites, Science Hall, University of Wisconsin, Madison, Wisconsin.

Dear Prof. Thwaites:-

On the evening of the 21st inst. the above ordered me to report completely on the water supply situation and gave me about a month in which to do it.

I realize that you can do very little on an Illinois matter such as this, yet you have in your past experience, prior to your connection with the Illinois Geological Survey, some good information on the Des Plaines anticline and the general geological conditions in that district.

It is my hope that when next I see you, I may obtain some information which will help me in my work. I have in mind drilling further to the west or northwest as I feel that in so doing, it will be possible to avoid some of the troubles which have been experienced in the past.

Looking forward with pleasure to seeing you, I am,

Yours very truly, Albertachinane