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Oct. 12, 1977 ~~18~~ ~~Feb 87~~

Stenographic Transcript of
Proceedings.

pgs 118

- Gary S. Salzman direct + cross exam.
- stipulation of facts

ML 000681 S

A-813-78
no Ref.

SUPERIOR COURT OF NEW JERSEY
LAW DIVISION - MORRIS COUNTY
DOCKET NO. L-42857-74 P.W.
A-0913-78

JOSEPH CAPUTO and ALDO
CAPUTO,

A 150 SEP 1979

Plaintiffs,

-vs-

CHESTER TOWNSHIP,

Defendant.

STENOGRAPHIC TRANSCRIPT
FILED
of
JAN 1 1980 PROCEEDINGS.

REC'D.
APPELLATE DIVISION

FEB 1 1979

Stephen W. Townsend
CLERK

AG
Edythe M. ...
Clerk

FILED
APPELLATE DIVISION
FEB 1 1979
CM
Edythe M. ...
Clerk

Place: Morris County Courthouse
Morristown, New Jersey 07960

Date: Wednesday, October 12, 1977.

B E F O R E:

ROBERT MUIR, JR., Assignment Judge, Superior Court.

TRANSCRIPT ORDERED BY:

PHILIP LINDEMAN, II, ESQUIRE.

A P P E A R A N C E S:

MESSRS. HELLRING, LINDEMAN, LANDAU & SIEGAL,
BY: PHILIP LINDEMAN, II, ESQUIRE,
For the Plaintiffs.

MESSRS. McCARTER & ENGLISH,
BY: ALFRED L. FERGUSON, ESQUIRE,
For the Defendant.

JAMES HILLAS, ESQUIRE,
BY: FORREST R. GOODRUM, ESQUIRE.

Earl C. Carlson, CSR
Official Court Reporter
Morris County Courthouse
Morristown, New Jersey
285-6249 07960

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1 THE COURT: Before we start there are a couple
2 of things I would like to do. I think, first of all
3 put my impressions on the record of what I saw this
4 morning as we walked across the Caputo property for
5 about an hour, hour and a half.

6 With respect to the roadways, the property
7 borders on two roadways. One is called Fox Chase
8 Road. And for the entire border of the Caputo
9 property on the northwest, westerly side the roadway
10 is unpaved. There is no black-top or asphalt. It
11 narrows to the point where two cars can pass, but
12 they would have to slow down, and, in fact, as I
13 traveled along it, I passed two cars in both instances
14 I had to pull over to the right and the other driver
15 had to pull over to his right so that we could pass
16 each other at a slow pace.

17 The other road is to the southwest and it's
18 called Chester-Gladstone Road. It is paved. And I
19 approximate its paved width of about twenty feet.
20 There is nothing sacred about it. It's flat, but
21 two cars can easily pass each other on the traveled
22 way.

23 The area is generally rural. The parcel of
24 land in question is divided by a brook that comes
25 out of the approximate north and runs so that it

1 bisects the property into approximately two areas
2 which I will call the southwest third and the north-
3 west two-thirds.

4 The brook passes under a bridge on the Fox
5 Chase Road as it enters the property. It is a clear
6 brook. There are some stones in the brook, as it
7 enters the property. My observations of the brook
8 is that it varies in width so that there is no
9 specific width that I can state. In some points it
10 is as much as eight or ten feet wide. Not especially
11 deep.

12 At one point on a bridge that is to the southerly
13 end of the property down near a house that is shown
14 on P-2 as it goes under that bridge, it might be
15 eighteen inches to two feet deep. But that did not
16 seem to be any generalized condition. It has
17 varying depths. It is clear water that runs down
18 through.

19 I saw no fish or anything in it of note. Now,
20 in the southwest third is Mr. Joseph Caputo's home.
21 It sits on a knoll. I would say approximately five
22 hundred feet from Fox -- I'm sorry -- five hundred
23 yards from Fox Chase Road and approximately the same
24 distance, perhaps a little more from the Chester-
25 Peapack or Chester-Gladstone Road.

1 The area around the house is open. There is a
2 field in what I will call the front. It is a grassy
3 area. It is a grassy knoll. It has been planted
4 with trees. There are some apple trees in the area
5 as you come up both roads, Fox Chase and the Chester-
6 Gladstone Road.

7 As you look down on the topographic map that
8 is P-2, I found to be relatively accurate insofar
9 as the topo calls. The property falls off gradually
10 from the Caputo home to a point and then it drops
11 rather sharply down towards the brook.

12 On the other side of the brook, which would be
13 the north and northeast side it rises very sharply.
14 My measurement of the map that is on, that is P-2,
15 indicates that in approximately 450 feet it rises
16 some 220 feet to a knoll in the northeasterly,
17 center of the northeasterly quadrant on the back
18 property line.

19 The property is wooded, substantially wooded
20 in the area where it is proposed for, on P-1, as an
21 area for open space and spray irrigation. There are
22 some outcroppings of rock in the most northerly
23 corner. Not significant.

24 One area was shown to me to be a spray
25 irrigation area. There were some outcroppings of

1 rock, as I indicated. Not significant. And that
2 would be in the most northerly corner of the
3 property, which from the knoll or the plateau that
4 I described, drops away and down toward Fox Chase
5 Road.

6 Walking across the northerly boundary line of
7 the property, it's high wooded and open. Toward
8 the more north, probably the most northeasterly
9 corner on the map, there are some test pits shown,
10 10 and 9. Near the 9 marker on the map I found
11 about a twenty-five square yard area of concentration
12 of rock on the surface. I don't know what kind of
13 rock it is.

14 I picked up one piece, which I will have
15 marked and will ask the geologist to identify it.
16 That also is indicated to be a possible area for
17 the spray irrigation.

18 Backing up a moment. From the brook up to the
19 plateau that I described, I found it to be very
20 steep, heavily wooded, although there are some
21 pathways and roadways going through it.

22 As you get to the more easterly side of the
23 northeast two-thirds and starting, progressing away
24 from the northerly toward the southerly boundaryline
25 of the property, there are open fields. Some of

1 these areas are identified as belonging to Aldo
2 Caputo.

3 On the topographical map there is shown a wire
4 fence. It is a barbed wire fence and grown into
5 the trees along the property. To the easterly side
6 of that fence there is a significant open field
7 through which there was a roadway, or at least an
8 area where cars had driven over so that the tracks
9 of cars were easily seen and easily walkable.

10 A point midway between the rear property line
11 and the front property line the view toward the
12 south and southeast is directly toward the municipi-
13 pality of Peapack Gladstone. Off in the distance
14 can be seen the spires of two churches protruding
15 through the trees. And farther to the east and
16 southeast can be seen a high ridge of land that
17 seems to be significantly higher than the property
18 in question.

19 I make that notation of the ridge only for the
20 purpose of identifying what you can see.

21 The road from -- strike that -- the property
22 from the northerly boundary line toward the souther-
23 ly boundary line, if you will, in that two-thirds
24 area that I have described is gradually sloping
25 except in one area where it drops off steeply. And

1 that's down towards the brook. But generally it is
2 a gradually sloping area where the fields are
3 easily traversable by foot. And down in the area
4 where the P-1 is suggests a retention basin. It
5 is low and adjacent to the brook.

6 The brook runs along the edge of Mr. Aldo
7 Caputo's property at that point and then leaves
8 the property traveling approximately south or
9 southeast.

10 I should make a note. On the most easterly
11 corner of the northeast section, as I describe it,
12 there was a large wooded area where the Caputos
13 had set out a picnic table. The woods were
14 interestingly enough very clear of any undergrowth.

15 I don't know whether that has any geological
16 or ecological significant, but it impressed me
17 because most of the wooded area had a great deal
18 of undergrowth. That area had none. And it did
19 not seem to be a significant concentration of pine
20 trees which might be a cause of the pine droppings
21 keeping the growth from coming up. I don't know
22 why that is. But, I think, I should note it.

23 There are some buildings on the property, some
24 of which I did not see, some of which I saw.

25 I found that the topo map in locating the

1 buildings is sufficient for my information.

2 Oh, one thing. Where the brook enters the
3 property on the north, well, as it comes up Fox
4 Chase Road there seems to be an -- I did not walk
5 back in -- there seems to be some kind of feeder
6 stream several hundred feet in on the brook coming
7 let's say at that point parallel or approximately
8 parallel to Fox Chase Road.

9 I did not walk back to that feeder stream to
10 find out if it was a spring or what it was. It
11 comes down a fairly steep embankment.

12 Those are the only comments that I have.

13 MR. LINDEMAN: May it please the court, I
14 think the court has really made a remarkable note
15 of the property during the course of our walk this
16 morning. But may I request, I do request that in-
17 spite of the fact that the court did see things,
18 particularly the rock, the appearance of the stream
19 that it nevertheless will rely upon what the
20 experts will say?

21 THE COURT: Oh, yes.

22 MR. LINDEMAN: I don't hesitate even though
23 these things, Judge, you know, because I don't
24 want to appear to be impertinent and I know that
25 the court will do that.

1 But, for example, I don't even know what the
2 answer is about the area around the picnic bench
3 in that grove of trees, but maybe it may have been
4 cleared at one time or maybe represents --

5 THE COURT: May or may not have any significance.

6 MR. LINDEMAN: Right.

7 THE COURT: I don't know. The rocks may or
8 may not have any significance. I don't know. I am
9 just noting what I saw for particular reference.
10 Some of what I saw is going to help me identify the
11 areas that you are talking about, particularly
12 where somebody tried to find test hole number 9.
13 That is going to be helpful to identify an area.

14 No, the visit was more for my edification so
15 that when we have people talking. I can see what
16 they are talking about. I can envision in my mind
17 rather what they were talking about rather than
18 try to do it at a later time.

19 MR. LINDEMAN: And for orientation.

20 THE COURT: More for orientation than anything
21 else. Just wanted everybody to know what my
22 impressions were. They were not of great signifi-
23 cance.

24 MR. LINDEMAN: All right.

25 THE COURT: Now, before we proceed, something

1 I forgot to do yesterday. I don't know whether
2 we would have had time to do it, but while I was
3 reading the brief that was filed by the plaintiff
4 last evening my attention became concentrated on
5 pages 5 through 10, and wherein I quote the
6 plaintiff. Quote, "The relief sought," and, as I
7 say, it goes on for several pages. I would like
8 to go over each one of those and find out partic-
9 ularly since the pretrial in this case by Judge
10 Gascoyne took place prior to the filing of the
11 amended Complaint by some period of time.

12 As I recall, the pretrial order was in March
13 of 1976 and the amended Complaint was filed in
14 January of 1977. December 6, 1976.

15 MR. LINDEMAN: Is your Honor aware that there
16 was a second pretrial conference on April 1, 1977?

17 THE COURT: No, I don't have that. You have
18 a second pretrial?

19 MR. LINDEMAN: Yes, sure.

20 THE COURT: Okay. Let me see that. It
21 doesn't -- I was not aware of that. It doesn't
22 change things. Either it did happen -- pardon me?

23 MR. LINDEMAN: It just happened. I just
24 thought that the court should recall it.

25 THE COURT: I was not aware of it. I had my

1 law clerk go through the file and thought I saw
2 everything, but I overlooked that. It is not my
3 present law clerk. It is not in the file. My
4 present law clerk tells me, so it has been mis-
5 placed.

6 All right. What I would like to do with
7 respect to certain of them -- I'll ask. I think I
8 can anticipate clearly the response with respect
9 to others. I think, I would like to get a little
10 more detailed posture of the plaintiff's position.

11 Now, so taking number or letter paragraph A.
12 You can sit down, please.

13 "A declaration of unconstitutionality of
14 said ordinance under the theories of Mt.
15 Laurel and Madison Township."

16 I assume that is still an issue, a very
17 viable issue, so there is no need to question that.

18 MR. LINDEMAN: Excuse me. Is your Honor
19 referring --

20 THE COURT: I am looking at Mr. Ambrose's
21 brief.

22 MR. LINDEMAN: I beg your pardon.

23 THE COURT: Okay?

24 MR. LINDEMAN: Fine. I don't have all the
25 documents. That's all right.

1 THE COURT: Okay, would you get the original
2 of the brief and let Mr. Lindeman see it? I don't
3 think you should see any copies because I got some
4 notes on it.

5 MR. LINDEMAN: No.

6 THE COURT: Are you both without a brief?

7 MR. LINDEMAN: We didn't take a van up to the
8 courthouse.

9 THE COURT: I will tell you what I will do.
10 When we are through doing this, I will ask my law
11 clerk to take the original and just photostat those
12 pages. May be you can make notes now and so that
13 we can then -- you can compare your notes with
14 those pages so at least we will have those pages.

15 A. I think, is obviously still in issue.

16 "B. A rezoning of plaintiffs' properties."
17 Clearly that's still in issue.

18 "C. A fixing by the Court of the defendant's
19 fair share of low, intermediate, and moderate
20 income family housing to meet the needs of the
21 region."

22 I assume that is still a viable issue.

23 "D. To order and direct the defendants to pro-
24 vide the realistic opportunity for said fair share
25 of housing, and to enact zoning consistent there-

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with to permit the same."

Now, the only question that I have to ask is, what realistic opportunity means from the standpoint of the plaintiff? And let me say this: maybe I am doing something that isn't -- well, maybe there should be some time, Mr. Lindeman, to think about it.

I would like to do this with each one of these things. If you want to go over them now, fine. If not, I will wait until Monday. We can go over them on Monday morning.

MR. LINDEMAN: If your Honor please, I am satisfied to respond as to that right now and tell you what I think it means.

THE COURT: Okay.

MR. LINDEMAN: By realistic opportunity it is intended that the powers that be provided for zoning for multi-dwelling, high density low cost housing in areas where it is likely to be built and not in those areas where for practical or sociological or environmental or whatever other reasons may apply, it is just not going to happen. So that's what is mean, and I --

THE COURT: All right.

MR. LINDEMAN: And I do believe that is still

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an issue.

THE COURT: Okay, fine.

MR. LINDEMAN: And a contention.

THE COURT: I figured it was. Just wanted to get the realistic opportunity.

"E. To establish a Housing Authority to develop such housing, and to fund that Authority."

MR. LINDEMAN: We withdraw that, your Honor.

THE COURT: Withdraw that. Okay.

"F. To require the defendants to plan, provide for, develop and construct improvements to areas to be rezoned to permit such housing."

MR. LINDEMAN: Well, that probably goes beyond the purview of the court. I don't know that it can.

THE COURT: This is why I said to you, would you like --

MR. LINDEMAN: Supposedly --

THE COURT: Yes.

MR. LINDEMAN: Suppose I think of that one, your Honor. Yes, sir.

THE COURT: All right. Okay. I will mark a question mark and on Monday you can let me know.

MR. LINDEMAN: Okay.

THE COURT: All right.

1 "G. To declare the Comprehensive Plan of August,
2 1974 invalid."

3 All right, I know that is still.

4 "H. To revise the same in accordance with the
5 directors of this Court."

6 MR. LINDEMAN: Yes, quite right.

7 THE COURT: That would still be an issue.

8 MR. LINDEMAN: Right.

9 "I. To order the defendants to cooperate
10 with and subject themselves to the orders, rules
11 and regulations, and directives of the Division
12 of State and Regional Planning of New Jersey in
13 accordance with Executive Order #35 issued by
14 the Governor for the preparation of housing
15 goals in Chester Township, and, pursuant thereto,
16 to require the submission of all appropriate
17 data to the Director."

18 MR. LINDEMAN: Your Honor, we are seeking
19 that the defendants comply with law, whether it
20 be statutory or precedent law. I think, that
21 perhaps this is just a restatement and really is
22 unnecessary.

23 THE COURT: Would you let me know because
24 that directive is in issue in the courts right
25 now, as I understand it. It is being challenged,

1 as a matter of fact, in this courthouse. It is up
2 on appeal, an interlocutory appeal. I don't know
3 what the status of it is. Insofar as being -- as
4 a matter of fact, it was Judge Gascoyne who heard
5 it in, I believe, July. But that is on the
6 regional planning of New Jersey. The Division of
7 State and Regional Planning of the State of New
8 Jersey.

9 These are things that to my way of thinking
10 have some specific reference. Not just generalized
11 reference. They have specific reference.

12 I have not read that executive order and, of
13 course, if it is an issue in the case, I will have
14 to see it and I will have to see what kind of
15 presentation and directives of the Division of the
16 State and Regional Planning.

17 What I want to know, do you want to bring it
18 in or do you want to leave it out, or how do you
19 want to qualify it?

20 MR. LINDEMAN: I will consider that, your
21 Honor.

22 MR. FERGUSON: I thought that section order
23 35 was withdrawn by the Governor.

24 THE COURT: I maybe wrong.

25 MR. FERGUSON: I thought it was withdrawn.

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and I thought the case before --

THE COURT: Is that the case before Judge Gascayne, number 35? Yes, it was not withdrawn.

MR. FERGUSON: It was not withdrawn?

THE COURT: It is being challenged.

MR. FERGUSON: Well, it might be that DCA Development got it. I'm not sure.

THE COURT: Let's find out. If I am going to rule on this aspect, I'm going to have to see all those directives, orders, et cetera, which are. So you let me know on that one.

MR. LINDEMAN: I will, your Honor.

THE COURT: "J. To restrain the Township from receiving federal and state grants and loan aid for improvements until the Township of Chester is in the process, as found by the Court, in meeting the fair share referred to above; to allocate specific housing goals in terms of units for different economic segments of the population."

That latter phrase from the "to allocate" refers back to an earlier one. But the restraining of the township from receiving federal and state grants, would you like to think on that one for a while?

MR. LINDEMAN: No, I don't want to think about

1 it, your Honor. We withdraw it.

2 THE COURT: Okay.

3 "K. To cooperate with the Plaintiff in the
4 development of the Plaintiffs' property."

5 So that is obviously continues to be there.

6 "L. To restrain the Township from permitting
7 any more residential development in the R-2 and R-5
8 residential zones until the Court determines if it
9 deems necessary the exact amount of Chester Town-
10 ship's fair share of present and future housing,
11 and further determine the reasonable expectancy
12 of the construction thereof."

13 Now, let me say what my immediate reaction
14 to that was. Can I do that without the property
15 owners of the Township of Chester being parties?
16 Am I not going to run headlong into due process?
17 Because, if I say someone cannot have any more
18 residential development, I don't know how. That
19 is a rather broad statement that might mean if I
20 owned a lot in Chester and I want to build a house
21 on it, that restrain would apply to me.

22 That's as simplistic as I could get, the due
23 process problem. I could get it more complex.

24 MR. LINDEMAN: Well, obviously what was in
25 mind here is that the township not permit any other

1 construction virtually of any kind to be done
2 because if it is commenced in various areas,
3 that will preclude the township from rezoning as
4 properly it should or it might, it might preclude
5 it because certain of the areas that it perhaps
6 should fix for multi-family dwellings or some
7 other kind of^a zone will have been already used
8 for this R-2 or R-3 purpose. Therefore, the
9 intent is not really directed to the direct
10 property owners not to build, but to the township
11 to tell the people that can't build.

12 I can see it goes pretty far.

13 THE COURT: It is a bee hive.

14 MR. LINDEMAN: Yes. I am frank to say, your
15 Honor, that we will not offer any testimony in
16 that regard. Naturally because it is purely, it
17 is just a remedy that is referred to. I am
18 simply hopeful that the trial will move speedily
19 along sufficiently that it won't be necessary to
20 take any rash action of that kind.

21 THE COURT: Okay.

22 "Restraining the Planning Board from approving
23 any subdivisions or site plans involving the
24 creation of residential lots of more than one acre
25 in size."

1 Now, that again falls within the same problem.
2 If I have a minor subdivision or a subdivision and
3 I own two lots and I own ^a two acre parcel and I
4 want to put two houses on two separate lots, one
5 acre apiece, due process jumps out at me and glares
6 at me.

7 MR. LINDEMAN: May I just have half a moment,
8 your Honor?

9 THE COURT: Sure. Yes.

10 MR. LINDEMAN: May I think about that one,
11 your Honor, and not withdraw it at this point?

12 THE COURT: Okay. All right.

13 "N. Ordering Chester Township to distribute
14 portions of its tax revenues to municipalities
15 of the primary market region until the Court
16 determines the fair share of Chester Township as
17 aforesaid."

18 That seemed a little incongruous to me as a
19 position for the Caputos because what you're asking
20 me to do, as I understand it, is to take some of
21 the tax revenues that Mr. Caputo himself contributed
22 to the township and distribute that to other
23 municipalities as their fair share.

24 MR. LINDEMAN: I think, this is an ingenious
25 request on the part of my predecessor, your Honor.

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but we will withdraw it.

THE COURT: Okay. Now, the next one is O.

"To suspend the power of Chester Township to plan and zone, and the power of the Planning Board to administer such provisions of the zoning Ordinance, including site plans and environmental impact statements, and the land sub-division ordinance of the Township of Chester, until the Court fixes and determines said fair share."

I would be less than candid to say to you I have a serious reservation whether I can suspend the power of the zoning ordinance. I can direct the exercise of it, I think, but I would say that I have a serious question in my mind.

I am not saying that I absolutely couldn't do it under the greatest of provocation, but to say to suspend a duly delegated responsibilities through the legislature concerns me.

MR. LINDEMAN: Well, if your Honor please, this brief was written before the events of last May and --

THE COURT: I realize it was. That's why I'm trying to clear it up because the pretrial order you showed me did not help me too much.

MR. LINDSMAN: We all know that the municipality

1 is making efforts which we consider, of course, to
2 be insufficient, but that they are making efforts
3 and I think it would be in bad grace for us now to
4 tell them to stop. I would rather they went forward
5 and try to do the best they can. I hope they do
6 the right thing.

7 THE COURT: How about if you withdraw --

8 MR. LINDEMAN: I'll withdraw it.

9 THE COURT: The word "suspend."

10 Now, the next one. "To appoint a trustee or
11 receiver for Chester Township." I am not going to
12 go any further.

13 MR. LINDEMAN: We withdraw that, your Honor.

14 THE COURT: Yes.

15 Now, 9. "To fund the action of the trustee
16 from municipal tax revenues." That would have to
17 be withdrawn then too.

18 MR. LINDEMAN: Yes, your Honor.

19 THE COURT: All right. "R. To order the
20 defendant, Township of Chester, to provide in its
21 budgets a contingency reserve to pay for and fund
22 the objectives and implementation of the same in
23 accordance with the Court's order."

24 MR. LINDEMAN: If your Honor please, I think,
25 we can leave that in and the court will simply

1 decide whether it would feel that the situation
2 calls for it or not.

3 THE COURT: Okay.

4 The next one is, 5. "That the Township of
5 Chester be ordered to reformulate a rezoning of
6 Chester Township into a reasonably balanced
7 community, and to authorize said Township to form
8 a Housing Authority for said Township and to fund
9 the same, including the administration thereof and
10 to provide for the accomplishment of the future
11 fair share of housing as ordered by the Court."

12 That seems to be another restatement of a
13 mixture of things that you have asked for. I
14 think, you have talked about the reformulating of
15 the rezoning before for a balanced community.

16 The housing authority you have withdrawn and
17 providing a fair share of the future housing is
18 already in it. It seems to me that it is a
19 reassertion unless you can see something in it
20 new that I do not.

21 MR. LINDEMAN: I do not, your Honor, but by
22 consenting to a withdrawal, of course, we did not
23 waive our claims in the first part.

24 THE COURT: The most concern I have/^{is}for the
25 housing authority.

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MR. LINDEMAN: Yes, sir.

THE COURT: As you can be well aware. I will consider it withdrawn, but qualifying all others if it, if the others don't satisfactorily cover it as that one did.

MR. LINDEMAN: All right. Now, T.

THE COURT: Now, T.

/ "To set aside the ordinance on the grounds that the same has not been adopted in accordance with N.J.S.A. 40:55D-28, et seq."

MR. LINDEMAN: I think that is still in.

That is the one that calls for land use element and recreation and all the other things that still are an issue.

THE COURT: Okay. "U. That the Comprehensive Plan of August, 1974 does not meet the requirements of the Municipal Land Use Law of 1975, with the consequence that the zoning ordinance under attack, #76-12, is not lawfully enacted in accordance therewith."

I assume that is also withdrawn?

MR. LINDEMAN: Yes, your Honor.

THE COURT: All right. "V. That said ordinance is procedurally defective in that even if that 1974 Comprehensive Plan meets the requirements of the Municipal Land Use Law of 1975, such

1 ordinance is inconsistent with the land uselement
2 of that plan, with no reason for such inconsistency
3 set forth, and then it cites the section.

4 MR. LINDEMAN: I think that is still in.

5 THE COURT: Still in. Okay. And finally, "W.
6 That the development procedures and fees imposed
7 by said ordinance are burdensome, excessive and
8 unlawful, including site plan and environmental
9 procedures and fees."

10 MR. LINDEMAN: I would rather not withdraw
11 that, your Honor, although I'm not sure.

12 THE COURT: One point I want there though is,
13 you know, it is your burden to establish that
14 they're unreasonable. So you're going to have
15 something with respect to that. I don't know how.

16 MR. LINDEMAN: I may have something to say
17 as to the burden of proof, your Honor, but I would
18 rather not do it at this time, unless the court --

19 THE COURT: Okay.

20 MR. LINDEMAN: -- directs me to do that. But
21 I do not want to withdraw that one.

22 THE COURT: All right. That clears that up.
23 So let us give that brief to my law clerk and she
24 is right behind you and she can make photocopies.

25 All right, we can then proceed with your

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first witness.

MR. LINDEMAN: May I get to another element?

THE COURT: Sure. Something else?

MR. LINDEMAN: Before actually proceeding with the witnesses, your Honor.

THE COURT: Let me just make a note, will you please? All right.

MR. LINDEMAN: If your Honor please, what I have been doing now is offering into evidence is a stipulation of facts, a copy of a stipulation of facts, undated, which photocopy bears the signature of Mr. Ambrose and Mr. Ferguson. Mr. Ferguson is now checking it to see if it comports with his.

THE COURT: Okay. Mark it P-3 in Evidence.

(The stipulation referred to was marked P-3 in Evidence.)

MR. LINDEMAN: That having been done, your Honor, I have this observation and perhaps something almost in the form of a motion to make to the court, although I don't know that it should be so dignified.

But during the remarks of Mr. Ferguson as counsel for the defendant, he stated that it was the position of the defendant that it is not a developing municipality in accordance with the relevant precedence. I submit, that that, of course, is conclusionary and I suppose has to be

1 decided by the court. But the stipulation of
2 facts is one which defines the municipality in
3 terms of its area, paragraph one. And then it
4 refers in the later portions to the increase in
5 population from the decade 1950 to 1960 and then
6 1960 to 1970.

7 The court even at this point, I think, can
8 take judicial notice of where Chester is. It
9 refers to income levels in this municipality and
10 in the environs and all those things which I have
11 just mentioned and many more that are contained
12 in the stipulation are those which fit into the
13 various slots of a developing municipality so
14 defined by Justice Hall in Mt. Laurel.

15 Now, while I don't think it is any great
16 burden upon us to prove it, it would seem to me
17 that it's appropriate at this state of the case
18 that the court direct that in fact Chester is a
19 developing municipality, at least, within the
20 context of Mt. Laurel. And I --

21 **THE COURT:** There is a note in Mr. Ferguson's
22 brief.

23 **MR. LINDEMAN:** Sir?

24 **THE COURT:** There is a note in Mr. Ferguson's
25 brief. I don't have it with me, but perhaps my

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law clerk can get it.

MR. FERGUSON: We have an extra.

THE COURT: She will have it.

Page 38 of this brief and insofar as your motion is concerned, this is as far as I am going to go on it today. He says this, and I quote: "It is futile to place emphasis on whether the label developing municipality is to be applied to Chester Township."

MR. LINDEMAN: Well, I agree with that.

THE COURT: Okay. I can't make, I can't make that kind of evaluation, I don't think. I have got to the stipulation as you have been talking. Perhaps impolitely on my part. I have been glancing at the stipulation and certainly as to what it is and what not, a developing municipality as that has been sort of refined in a couple of more recent cases by the Appellate Division over in Bergen County. That is something that I am going to have to decide on my own.

I noted and I underlined it in my opening his reference to that. I also noted that comment in his brief. Okay?

MR. LINDEMAN: Mr. Salzman.

1 G A R Y S. S A L Z M A N, sworn.

2 DIRECT EXAMINATION BY MR. LINDEMAN:

3 THE COURT: Gentlemen, here are those pages
4 of that brief and I might note that my law clerk
5 has told me that there was a further executive
6 order number 41 that related back to number 35,
7 but merely delayed the time when certain things
8 should be implemented under 35.

9 Okay.

10 MR. LINDEMAN: If the court please, we will
11 be offering Mr. Salzman as our expert on soils and
12 geology.

13 Q Mr. Salzman, would you state please your place of
14 employment? A I am presently manager
15 and associated with Joseph S. Ward, Incorporated, consulting
16 engineers. 91 Roseland Avenue, Caldwell, New Jersey.

17 Q What is your educational background commencing
18 with your college work? A I have a
19 bachelors in civil engineering degree from the Cooper Union
20 in 1938. I have a Master of Science in soil application and
21 foundation engineering from the University of Illinois in
22 1939.

23 I have post graduate course at Columbia University and
24 Newark College of Engineering in the field of soil application
25 and foundation engineering. I have had courses in hydrology

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1 hydraulics at Rutgers University in which the latest being
2 in March of 1977.

3 I have had courses in soil erosion and sediment
4 control from the University of Wisconsin and from Rutgers
5 University, the latest being 1977. I have also attended
6 other various program courses and seminars in myriad of
7 related subjects.

8 Q When did you first become -- is that the completion
9 of your formal education?

10 A Yes.

11 Q All right. When did you first become associated
12 with Joseph S. Ward, Inc.?

13 A In 1959.

14 Q Was that your first employment?

15 A That was my first full time employment following school,
16 yes.

17 Q Right. Now, in what capacity were you first
18 retained by that company? A I was first
19 retained as a junior engineer and in 1963 I was made an
20 associate and manager of the firm.

21 Q Would you tell us please what kind of projects
22 you have been involved in since your employment with that
23 company which relates generally to an investigation of soils
24 and geology as you understand it in this case? That is to
25 say, you don't have to tell us everything you have done, but

1 just those things which bear on this.

2 A I have been associated, been manager on many hundreds
3 of projects. Some of the highlights would be Bratenahl,
4 Ohio, which were highrise apartment buildings in a suburb
5 of Cleveland, which was the recipient of the Consulting
6 Engineers Council's national award for outstanding achieve-
7 ment in the field of soils and foundations.

8 I have performed the design of Windmere Lakes, a forty
9 or forty-five foot high earth dam in Murphysboro, Massachusetts.

10 I was the engineer in charge of foundations for Ideal
11 Toys, which was a one million square feet of factory and
12 warehouse in Newark, New Jersey.

13 Many offices, buildings, manufacturing buildings in
14 Burlington, Vermont for I.B.M.. I performed the soil and
15 foundation and much of the environmental work for the 195
16 Broadway Corporation complex in Basking Ridge.

17 Q The 195 Broadway Corporation being a subsidiary
18 of what company? A AT&T.

19 Q Right. A The Wilmington Metal
20 Company in New Castle County, Delaware, was one of mine.
21 I am now completing excavation standards for the National
22 Bureau of Standards, Washington, D.C.

23 Other projects include the Rockaway Town Square Mall,
24 The new shopping center in Rockaway Township. Martin Luther
25 King High School in Manhattan and the current project on

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1 which I am working is the Regency Hotel in Atlantic City,
2 New Jersey.

3 Q Have you had occasion to give testimony as an
4 expert in geology and soils in other tribunals in this state?

5 A Yes, I have.

6 Q What kind of tribunals?

7 A There was -- let's see -- it was once before in a court
8 of law and that was in a matter of the value of land. It
9 was a board of education versus a property owner in a con-
10 demnation proceeding and I was called upon to indicate the
11 value of the land, the soils and geology of the land so that
12 the developmental costs could be assessed so that the value
13 of the land could be established.

14 Q Are you licensed as a engineer any place?

15 A Yes, I am a registered professional engineer in the
16 State of New Jersey and New York.

17 Q Do you have any technical affiliations?

18 A Yes, I do.

19 Q If so, tell us what they are.

20 A I have been a member of the American Society of Civil
21 Engineers, Metropolitan Section and New Jersey Section. I
22 am a member of the National Society of Professional Engineers,
23 New Jersey Society, Morris County Chapter.

24 I am a member of the international Society of Soil
25 Application and Foundation Engineering. I am a member of the

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In The Appellate Division

REC'D.
APPELLATE DIVISION
FEB 1 1979

AG
Elyse M. Laughlin
Clerk

TO: Clerk, Appellate Division
Superior Court of New Jersey
Room 316, State House Annex
Trenton, New Jersey 08625

FROM: EARL C. CARLSON (Reporter's name)

RE: JOSEPH & ALDO CAPUTO v. CHESTER TOWNSHIP

Lower Court Docket No. (Ind./Acc./Compl. No.) L-42857-74 P.W.

County and Court MORRIS/SUPERIOR

Appellate Docket No. A- 0813-78

Transcript request dated 11/20/78

Received from Philip Lindeman, ESq. (Party requesting transcript)

Name of court reporting agency from which transcript ordered (if applicable)

	Date(s) For Which Transcripts Requested	Number of Transcript Copies Filed Herewith	Reason Copy or Copies Not Filed (e.g., date was a court holiday) (if applicable)*
1.	10/12/77 ✓	1 (118 pages)	
2.	10/26/77 ✓	1 (126 pages)	
3.	11/1/77 ✓	1 (128 pages)	
4.			
5.			

(If above space proves inadequate continue listing in appropriate place on another Transmittal Form and attach said Form hereto)

Date: Jan. 30, 1979 submitted by: *Earl C. Carlson* (Reporter's signature)

cc: Administrative Office of the Courts
Attn: Chief, Reporting Services

Earl C. Carlson (Reporter's supervisor)

Philip Lindeman, Esq. (Attorneys and pro se parties, if known)

Alfred Ferguson, Esq.

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1 Water Pollution Control Federation. I am a member of CHI
2 Epsilon, the National Honorary Civil Engineering Fraternity
3 and advocacy for one dollar a year.

4 I am chairman of the Randolph Township Municipal
5 Utility Authority here in Morris County and have been since
6 1974.

7 Q What if any learned papers have you produced?

8 A I have present to Gilbert Associates in Pennsylvania
9 a paper entitled Seepage and Ground Water, which was presented
10 in April 22, 1974 and is an internal publication of Joseph S.
11 Ward, Inc. I have also presented a paper to the New Jersey
12 Society of Municipal Engineers in 1976 entitled Geo-Technical
13 Aspects of Sanitary Landfill Design.

14 MR. LINDEMAN: I submit Mr. Salzman, your
15 Honor.

16
17 CROSS EXAMINATION BY MR. FERGUSON:

18 Q Mr. Salzman, have you ever worked on projects
19 involving spray irrigation of sewerage, effluent before Mr.
20 Caputo's project? A Yes.

21 Q Where? A Rockaway Township
22 Shopping Center.

23 Q That spray project, that is in operation?
24 A Yes, it is.

25 Q All right. Do you have a copy of your paper,

1 Seepage and Ground Water?

2 A No, I do not.

3 Q You don't have it with you?

4 A No, I do not.

5 Q If you come back to court, would you bring it?

6 A Certainly.

7 MR. FERGUSON: I admit the qualifications of
8 Mr. Salzman as a civil engineer.

9 MR. LINDEMAN: Well, I am offering him, of
10 course, as an expert in soils and geology, not
11 just a civil engineer.

12 THE COURT: Gentlemen, I have what might be a
13 unique request of both of you. As you present
14 your witnesses, I would like at the outset for
15 you to proffer what you expect to prove through
16 the witness. Partly for my own edification as to
17 where you are going with the witness and where
18 this witness fits into the pattern of overall
19 things.

20 In other words, you have this man. You know
21 what you want to prove through him. What is it
22 you're doing. You make a proffer of proof. In
23 other words, as if I was going to say, well, I am
24 not going to allow him to testify, but I will make
25 you make a proffer.

1 I don't need a great big broad, or I don't
2 need a specific detailed broad coverage spectrum
3 of everything he is going to testify to, but I
4 would like a synopsis of what it is.

5 MR. LINDEMAN: I think I can do that. I
6 thought I was being much too narrow when I stated
7 that I was going to offer him as a soil and
8 geology expert.

9 The purpose of the presentation of this
10 witness is to describe and define the character of
11 the surface and the sub-surface of the premises
12 in question from a soils point of view and
13 geological point of view to show where, if at all,
14 there are conditions of any unusual character below
15 the sub-surface, such as faults or aquifers or
16 unusual rock formations, if the witness knows, and
17 if he has been able to so determine. To state
18 what if anything may have been ascertained from
19 various tests of the soil.

20 There were, as the court has previously been
21 informed, various test pits dug on the property,
22 and, of course, their tests were made from the
23 contents of those pits. The witness will testify
24 as to what he found and what conclusions he drew
25 from what he found. As a soils and geology expert

1 He will also testify as to the location and avail-
2 ability to the extent that he is able of fresh
3 water, if it exists.

4 He will testify to the characteristics of a
5 watershed, if you will and the effects, if any,
6 that the topography of this property has upon the
7 watershed or part of a watershed.

8 I am sure you can add a few things to that.
9 That generally is what it is.

10 THE COURT: Okay. All right, fine. That I
11 would like to have done with every witness at the
12 outset.

13 MR. LINDEMAN: Right.

14 THE COURT: All right. Thank you. Go ahead,
15 Counsellor.

16 Q Now, Mr. Salzman, have you examined this property
17 and did you make any tests on it for any purpose?

18 A Yes, I did.

19 Q Now, I show you what is marked as P-2 in Evidence.
20 I wonder if there is any way...

21 A Perhaps tack it up here. Turn it around.

22 MR. LINDEMAN: Yes. May we do that, your
23 Honor?

24 THE COURT: Yes.

25 A It is a long map. Perhaps if we back it up maybe able

1 to see the bottom of the map as well.

2 THE COURT: No, it is all right. I can see
3 it. I can stand up, if I have to.

4 MR. LINDEMAN: Does the court have a pointer?

5 Q Mr. Salzman, P-2 was prepared under your direction,
6 was it not? A Yes, it was.

7 Q And would you please tell us just pictorially what
8 it is. That is to say, tell us what the parameters are and
9 what is contained in it briefly.

10 A First, it shows, well, first I should define what work
11 on this map is, the work of Joseph Ward, Inc. and what work
12 is not.

13 This map there is a basement involved in this document.
14 That basement shows the parameters of the property. Here is
15 Fox Chase Road circling about.

16 This would be Gladstone Road.

17 Q The first, it indicates the left side?

18 A The left side. Basically what would be the westerly,
19 generally westerly property line.

20 Q All right. A And then Gladstone
21 Road the general southerly or southwesterly property line
22 down here. And the other property lines, the general north-
23 erly property line. The general easterly property lines are
24 shown on this map. Also shown is the topography. Contour
25 intervals are shown at two feet and the horizontal scale is

1 one inch equals one hundred feet.

2 That information plus indications of tree lines, fences
3 and stream locations were furnished to us by Jayman Engineer-
4 ing Associates, Mr. Norman Smith.

5 MR. LINDEMAN: They will be offered later,

6 your Honor.

7 A I believe that the topography specifically on this map
8 was prepared by Robinson Aerial Surveys.

9 Also shown through here from Fox Chase Road is the
10 Peapack Brook. And one can trace it from Fox Chase Road
11 generally southeasterly finally leaving the property. It
12 tracks through on out. That constitutes the basement that
13 was furnished to our office.

14 Also shown on this map are the test pits advanced by
15 Jaman Engineering Associates as part of the study for the
16 Spray Irrigation system.

17 Q What do you mean by advance?

18 A Excavated under their supervision.

19 Q All right.

20 A Those are shown
21 by the solid squares. Also shown are the test pits advanced
22 by personnel from my office under my personal supervision.

23 Q Would you point some of those out?

24 A Here. Here is a test pit. Basically this is a square
25 with a triangle shaded in so that the square is half filled
in, half blank as compared to Jayman's pits which are solidly

1 filled.

2 All of this symboling that I am now speaking of is
3 defined in the notes and legend portion of this drawing.

4 Then this map shows the geologic formations as surface
5 formations on the site as shown by the symboling GN as one
6 symbol, AR as a second symbol, SH as a third, defining
7 different geologic conditions in different portions of the
8 site.

9 Also the approximate depth to bedrock is shown on this
10 drawing, such as this symbol greater than 10, meaning in
11 this entire zone we intrepret that bedrock is more than ten
12 feet below the ground surface.

13 And, your Honor, I suspect that the rock that you noted
14 were probably surface stone and not bedrock.

15 THE COURT: Yes, I will let you tell me that.

16 THE WITNESS: Because in the northern section
17 our evaluation indicates that it is more than ten
18 feet to bedrock in that area.

19 Q Before you get into your evaluation, are you, Mr.
20 Salzman? A Yes.

21 Q All right. Just hold it. Let me interrupt you
22 for a moment and ask you please if you would describe for
23 the court in a sixth grade way as you did to me a few days
24 ago what a watershed is. A Okay. A water-

25 shed --

1 Q That is to say so that I can understand it again.

2 A All right. Every point on earth is a watershed. If I
3 can use a mathematical expression, it constitutes the
4 locus of the area that flows to a point. There is -- so you
5 take a point on a stream and some place or other is a line
6 that a falling particle of rain falls will flow to that point
7 on the stream and the sum total of all the points that will
8 flow of all the aress that would flow by gravity down to
9 that point in the stream is the watershed for that point.

10 Q Now, on the premisses have you examined, have you
11 actually made any tests on it for any purpose?

12 A Yes.

13 Q What was, what were the tests please and for what
14 purpose?

15 A All right. The first of
the tests, well, the test pits themselves are tests.

16 Q Right. A These pits were dug
17 by a staff geologist under my supervision. And those them-
18 selves constitute tests and the logs of those test pits are
19 included in the report that I prepared.

20 Also I had performed in the testing laboratory of Joseph
21 Ward, Inc., certain grain size and other identification tests
22 on the soil so that the soil could be properly identified.

23 Q Now, did you use any other source materials for the
24 purpose of ascertaining the nature of the geology, such as
25 literature and the like? A Yes.

1 Q Would you tell us what it was?

2 A All right. First, a major tool that we used was the
3 examination and evaluation of stereo pairs of aerial photo-
4 graphs. There is a definite method and means and system in
5 geologic interpretation using aerial photographic studies.

6 One can check land form tones, shade potential, out-
7 cropping surface cover. There are many different features
8 which combined with index points such as known conditions at
9 a test pit location and inferred conditions from literature
10 that these studies and the geology of the area can be
11 established.

12 Now, I do have a list of references that I used and I
13 could read them, if you like. I would have to refresh my
14 recollection by looking at the specific references.

15 MR. LINDEMAN: If your Honor please, it would
16 be our intention at the conclusion of this testimony
17 to offer Mr. Salzman's report into evidence. Now,
18 of course, that would be subject to an examination
19 of the report by Mr. Ferguson, although, I think
20 you have already seen it. So, if perhaps we can
21 overcome that hurdle now as to whether or not it
22 will be received following his testimony, I will
23 ask that we not read this litany of reports because
24 all it will do is take up ^{the} time of the court. There
25 are other things.

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THE COURT: Mr. Ferguson?

MR. FERGUSON: I don't need the reports and the background material he reads, reference reads into the record. If I have any objections to the report, it will be from other, another ground.

THE COURT: Why don't you just do this then. Why don't he tell me the pages he would read in and I can mark those pages. I can look at those particular pages without referring to the entire report, if there is objection to the entire report.

MR. FERGUSON: Well, perhaps we are confused. I thought we were talking about background references which Mr. Salzman consulted to write this report.

MR. LINDEMAN: Yes, some of them, but some of the references are enumerated at page C-1.

THE WITNESS: That's correct.

MR. LINDEMAN: Of the report.

MR. FERGUSON: I mean, it is there. I don't need -- I am not going to object to introduction of the report into evidence on the ground that the sources he consulted have not been read into the record.

THE COURT: All right.

MR. FERGUSON: I may or may not object to the entire report. I don't know.

1 MR. LINDEMAN: Well, just hope. I will
2 remember if the report is not received, at least
3 offer page C-1 because that's what it is going to
4 be. It will be C-1 that is correct, Mr. Salzman,
5 that those references are on C-1 are those that
6 you consulted?

7 THE WITNESS: That's correct. Those plus the
8 stereo pairs of aerial photographs.

9 Q Now, what were you instructed to determine as an
10 expert as to the soil or the soil conditions of this

11 property? A Well, we were retained to
12 determine and evaluate geologic conditions of the area,
13 including site surface and sub-surface conditions and then
14 present an environmental geological overview of the project.

15 Q And is it your opinion that the literature that
16 you consulted and the aerial photographs that you observed
17 as well as the tests taken and analyzed was sufficient to
18 educate you to make whatever judgments you made?

19 A Yes, I do.

20 Q All right. Now, would you please described for us
21 the physiography of this property, but before doing so,
22 define the word physiography?

23 A May I define it with another word?

24 Q You may. A Geomorphology.

25 G-e-o-m-o-r-p-h- -- start again -- g-e-o-m-o-r-p-h --

1 THE COURT: -- m-o-r-p-o-l-o-g-y?

2 THE WITNESS: Yes, I would have to write it
3 too.

4 Q What do both of them mean?

5 A Yes, but I use the term in my report basically to talk
6 about the shape of the surface. And that shape is general
7 rolling hills of moderate relief bisected by a steep narrow
8 valley. That valley being the valley of Peapack Brook.

9 Topographically the low point on the site, on that
10 drawing is in the lower righthand corner where the Peapack
11 Brook leaves the property, which is at about elevation plus
12 340 to a high in the front portion of the land at about
13 an elevation plus 672.

14 Q Now, in terms of giving us your opinion and the
15 conclusions from your report, is there any importance to the
16 historical geology of the site in question and it environs?

17 A Yes, it would help to understand what the site is about
18 to understand what follows.

19 Q Tell us please then what the historical geology is
20 or was.

21 A Basically we are in a site
22 that is mostly what is referred to as the New Jersey Highlands.
23 And within the site a change occurs to the Piedmont Plain.
24 In simpler terms we go from the foot hills to the mountains
25 within the property, geologically speaking. And the distinct-
ions primarily on the origin nature and age of the bedrock

1 that we find.

2 Q Can you tell us about what -- tell us what the
3 highlands consist of.

A All right. The
4 highlands, which is most of the site, are precambrian rocks
5 which are gneiss, g-n-e-i-s-s. It is a type of rock and
6 there are also all sorts of names for that kind of precambrian
7 rock. Let's call it very, very oldest rock, oldest rock
8 on this earth is precambrian rock. That constitutes most
9 of the project.

10 In the southeast corner, lower right hand corner of this
11 project we have more recent rocks. Younger rocks. And on
12 this site they are the Martinsburg Shale. And the division
13 between those occurs abruptly.

14 Q Occurs where? A Abruptly in the
15 lower right hand portion of this drawing what I call the
16 southeast section.

17 Q Now, would you tell us about the low C formation?

18 A Well, the low C, well, that is precambrian rock. It is
19 Pristilene bedrock. The other type of rock is the Martins-
20 burg Shale. That is a sedimentary rock. Deposits hardened
21 under temperature and pressure and of much more recent
22 origin.

23 Q Now, is there a fault that separates the highlands
24 from the Piedmont bedrock?

25 A Yes, there is. That occurs in the southeast portion of

1 the property.

2 Q Is that an active or inactive fault?

3 A No, that is quite inactive. We are not talking about
4 something like the San Andrea Fault. We are talking about a
5 very, very old fault in the rock that has stopped moving
6 many, many years ago. Well before recorded time and is
7 totally inactive. So one need not be concerned about future
8 movements at that location.

9 Q Is there a fault, another fault located on the
10 premises in question? A This is the

11 only fault that is, as far as I am concerned, is known to be
12 there. There is another location where there is an inferred
13 fault, according to the literature.

14 Q Right. Tell us, please, in perhaps more detail
15 what a fault is? A All right. A fault

16 basically is a breaking of rocks where one moves up and down
17 with respect to the other, and so, therefore, if you consider
18 that once upon a time the rock was level and therefore the
19 same age, but then with a massive abrupt, or not necessarily
20 abrupt, but with a massive movement one rock moved up or
21 down with respect to the rock on the other side so now when
22 you take a horizontal line, the age across that line is quite
23 different. Very old rocks on one side and relatively young
24 rocks on the other side.

25 Q Now, you say that there is, you may infer from the

1 literature certain conclusions as to the existence of a
2 fault? A Yes.

3 Q Would you tell us what you found, what the infer-
4 ences are and what they would indicate?

5 A All right. Well, a series of sources is quoted in our
6 report as indicated on page C-1 of our report and those are
7 further delineated on this drawing.

8 Q P-2 in Evidence. A Which is our
9 plate number one. One source indicates that the fault runs
10 down this solid line. A second source indicates --

11 Q Excuse me. Indicating a solid blue line in the
12 lower right hand portion of the property?

13 A Uh-huh. There is another line which is a dash/dot line
14 in that same vicinity, there. And I believe there is a third
15 small dotted line in that same vicinity. All these are
16 literature indication of the location of the fault.

17 Now, based on that literature, based on the test pits
18 and based on our geological evaluation of the site, we have
19 shown our interpretation of the actual fault location. And
20 that is shown by this long dashed line in the same vicinity.

21 We do consider this line approximate. But we can say
22 one thing with absolute certainty.

23 Q Can you or do you? A We do say
24 with absolute certainty.

25 Q Right. A That the fault is between

1 Ward test pit number one and Ward test pit number three.
2 We could make that statement with absolute certainty because
3 the bedrock sheer was shown to be precambrian rock and the
4 bedrock that was in the test pit number one and in test pit
5 number three the bedrock was, seemed to be the Martinsburg
6 shale. Therefore, the fault must occur between those two
7 pits. And we have in our judgment, in my judgment found
8 the most likely location for that fault, and that is the
9 long dashed line in the lower right hand section of the
10 drawing.

11 THE COURT: Okay. Let's stop there for lunch.

12 Come back at 1:30.

13 MR. LINDEMAN: Leave it all there, your Honor.

14 THE COURT: Leave everything. It will be
15 undisturbed.

16 (The noon recess was taken.)

17 THE COURT: Okay, Mr. Salzman, please be
18 seated.

19 Q Now, as to the hydrology of the area.

20 THE COURT: Could I ask a question?

21 MR. LINDEMAN: Yes, your Honor.

22 THE COURT: As long as I picked up this rock
23 and carried it all the way down from Chester, what
24 kind of rock is that rock?

25 THE WITNESS: I should preface by saying --

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THE COURT: It was on the surface.

THE WITNESS: My specialty is more in the field of geomorphology, which is official geology landform rather than hard rock geology and specific identification.

THE COURT: Okay. I am just -- it is more curiosity than anything else. I found this near test pit 9 by Jaman.

THE WITNESS: I would suspect it to be a granite gneiss.

THE COURT: That would be class --

THE WITNESS: Precambrian.

THE COURT: Precambrian.

THE WITNESS: But to be more confident there should be a fresh line broken face because this is so highly weathered you can no longer see the individual pieces any more. But you can obviously see the quartz come through and the orthoclase. But without seeing a fresh face I really can't say because even starting moss .

THE COURT: I can see the moss. Why don't you just mark that C-1 at some later point. All right, go ahead.

MR. LINDEMAN: Are we going to do that, your Honor?

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THE COURT: He can do it later.

MR. LINDEMAN: All right.

Q We will get now into the area of hydrology, Mr. Salsman. Would you please define the word for us before we do that?

A Hydrology. Well, think of water in terms of how much there is and what it does and how it performs and acts, velocity, that kind of thing is hydraulics. So hydrology is how much water where.

Q How much water? A How much water where.

Q How much and where? A Yes.

Q Would you tell us please what the bedrock means?

A Well, let me define it by illustration, if I may? This entire, well, almost the entire property is in a residual soil area, that is, with one small exception, which I will show as the AR in the stream valley.

The soil on the site is all derived from the weathering of the parent material. Once upon a time there was just a solid hard mass of rock which, I think, we can all visualize. Then with time weathering occurred of that rock and different chemicals and the elements acted upon it turning the upper portion of that rock into soil.

Then with depth the soil as a transition went from soil to decomposed rock and then from decomposed rock to hard rock. And the hard rock below the decomposed rock is what I refer

1 to as bedrock.

2 Q And what is the depth of the bedrock in this area?
3 Would you describe it, please, from P-2 in Evidence?

4 A Yes. For the most part we define it in terms of ranks.
5 Either less than five feet to bedrock, more than five feet
6 to bedrock and more than ten feet to bedrock. And by far
7 the largest area of the site shows more than ten feet to
8 bedrock.

9 Q And what area would that be? Would you point it
10 out?

11 A Well, I could do it by
12 exception. There is a small zone in the very north end
13 which is more than five feet there. Between five and ten
14 feet between bedrock. Generally in the vicinity of Jaman's
15 pit 5.

16 There is also a small area in the vicinity of Jaman's
17 pit 7 that has more than, generally between five and ten
18 feet to bedrock. Then from the Peapack Brook valley to the
19 east almost everything else is more than ten feet to bedrock.

20 It is shown as the greater than ten symbol on the map.
21 The one, there is an exception around Ward pit, test pit
22 number one, which has more than five feet, therefore, prob-
23 ably between five and ten feet to bedrock.

24 On the west side of the Peapack Brook most of the area
25 again is more than ten feet to, from the ground surface to
bedrock with a smaller zone being more than five feet indi-

1 cating between five and ten feet to bedrock.

2 The only area on the site where we found that it is
3 less than five feet to bedrock is in the bed and the flood
4 plain of Peapack Brook. There where we find our only
5 transported soil because all the other soil aside from the
6 flood plain of the Peapack Brook, all the other soil on this
7 project was derived from the parent rock.

8 Within the Peapack Brook we have soil carried by the
9 stream. That shows on this map as the symbol AR and in the
10 Peapack Brook and in its flood plain. We have found that
11 the depth to Bedrock is less than five feet and that's the
12 only place and that area is not proposed for development or
13 for spray irrigation.

14 Q Now, can you tell us, please, from what sources
15 you determined that the bedrock is what you have testified
16 that it is?

17 A First we naturally used
18 the literature. We also used the direct physical evidence
19 of the test pits.

20 Q What do you mean by that?

21 A When a hole was dug in the ground we could see what's
22 in the ground and what the depth was, what the nature of the
23 soil is, what the nature of decomposed rock is and what the
24 depth to the rock is. So we know that I can illustrate,
25 let's say at test pit number 9.

Q Would you point out where test pit number 9 is?

1 A Test pit number 9 I just picked at random. It is in
2 the southwestern section to the west of the Peapack Brook.

3 THE COURT: You mean the Ward test pit?

4 THE WITNESS: The Ward test pit number 9.

5 Q Right. A Now, in that test
6 pit, the log of which is included in our report as page
7 number A-10.

8 Q Tell us what you found. A We found
9 all measurements being from the ground surface. We found one
10 foot of top soil containing some cobbles and a little
11 vegetation.

12 From the depth of one foot to a depth of four foot we
13 found yellow brown coarse to fine sand with some clay silt
14 and some cobbles.

15 Then from four feet to the end of the test pit, which
16 was ten feet below the ground, we found yellowbrown coarse
17 to fine sand to silt. That means that the fine grain fraction
18 there was about twenty-five per cent of the material was very
19 fine. Very fine grain. And my geologist noted that the soil
20 from the depth of four feet to a depth of ten feet was an
21 obviously residual soil. That means soil weathered in place
22 with a very slight appearance of clumps of soil being highly
23 decomposed rock, but having no strength.

24 Now, there is another word for this kind of material,
25 and that is saprolite. S-a-p-r-o-l-i-t-e. Evidences of

1 saprolite were also found in other of our test pits.

2 Q Right. Now, what if anything does the appearance
3 of rocks or boulders -- what some people would characterize
4 as stones, large stones on the surface of the ground
5 expecting the subsurface condition?

6 A Well, the conclusion could be reached that they are in
7 the ground. But it says nothing about the structure in which
8 they are contained.

9 We have found the presence of cobbles within the ground
10 and if one would look at the surface, one would see these
11 cobbles lying around. However, we viewed this place. We
12 examined the pits, dug in the ground and looking in the wall
13 of pit one can see that these stones are surrounded by sand
14 and silt and clays so that they are not sitting freely on
15 top of each other, but the stones are in a very dense matrix.

16 As a matter of fact, we have run grain size tests on
17 this kind of material as shown on pages B-3 and B-4 of our
18 report and they generally show between twenty-five and fifty-
19 five per cent of the soil in these tests in the silt and
20 clay size ranges.

21 Q Can you tell us what of the various test pits that
22 are on this property you actually examined prior to their
23 being backfilled?

24 A The J. S. Ward
25 test pits are pits, are those pits shown with this specific
 symbol, the square with half the square filled in. And that

1 would be test pit one through, I'm not sure of the last
2 number, either nine or ten.

3 THE COURT: You have referred to a ten.

4 THE WITNESS: The P-1 letter is a symbol,
5 the triangular symbol. I can look up exactly how
6 many pits we advanced. The are designated here
7 as TP dash through TP-9. The other pits on the --

8 THE COURT: Hold it just a second.

9 THE WITNESS: Okny.

10 THE COURT: You said there was except for
11 Ward pit number 10, which is over along the fault
12 that you found?

13 THE WITNESS: No, Ward did not do pit 10. It
14 wasn't Ward pit 10. I am sorry. Jaman pit 10
15 perhaps. Ward pit one.

16 THE COURT: Ward pit one?

17 THE WITNESS: One.

18 THE COURT: You said?

19 THE WITNESS: Yes.

20 THE COURT: I thought you said ten.

21 THE WITNESS: I am sorry. I may have. But
22 it is test pit one.

23 Now, on this map all the rock depths are shown
24 and we have drawn just the general soil types
25 above that rock.

1 Q Yes, what did you find?

2 A And most of the project is shown as GN and all of the
3 GN material is residual soil overlying the precambrian
4 gneiss.

5 Q Now, what if anything can be ascertained by exam-
6 ining the top of a test pit after it has been backfilled?
7 At least, from a visual point of view.

8 A From a visual point of view one can say that, yes, that
9 material is in the ground, but how it is in the ground with
10 respect to surrounding materials, nothing can be ascertained.

11 Q Would you describe for us now, Mr. Salzman, or
12 tell us, please, what an aquifer is?

13 A An aquifer in my terminology is a water bearing sub-
14 surface formation. Now, okay, an illustration. If you
15 drill a hole, a well, and if you are in an aquifer, you
16 should have a water yield from the well.

17 THE COURT: Like a lake under the ground?

18 THE WITNESS: No.

19 THE COURT: It is not?

20 THE WITNESS: No, most certainly not. It is
21 ground water. It is water that is within the
22 ground. Slowly moving in the ground that derives
23 from some place or other. The rain water seeped
24 in the ground or went into a stream or from the
25 stream seeped into the ground and then traveled

1 through the ground. If it is traveling in the soil,
2 it was traveling between the spaces of the soil.
3 There is, nothing is absolutely solid and if it was
4 traveling, it was traveling through the fractured
5 rock, through the fractures of the rock. So that
6 is basically the term aquifer.

7 Now, I normally use that word in a relative
8 way.

9 Q Explain, please. A There are
10 high water yielders and low water yielders. If you have the
11 kind of rock that if you drill a hole and you get very little
12 water out of that rock, I normally do not consider that as
13 an aquifer. But if you drill a hole and get a lot of water,
14 I consider that as being an aquifer.

15 Q Are there any aquifers that you know about on the
16 P.O.?

A On the P.O.?

17 Q The property in question.

18 A Oh. In my definition there would not be, per se. We
19 have primarily on this site the precambrian gneiss. Now, the
20 precambrian gneiss is known to be a low yielder of water.
21 One can normally get a sufficient amount of water for a single
22 family residences and other uses of that nature. Relatively
23 low usage, but normally not high quantity removals.

24 In this precambrian rock the rock itself is almost
25 impervious, so that the water derived from a well is flowing

1 through the fractures within the rock. And depending how
2 lucky you are when you drill your well, if you cross a lot
3 of fractures that run a long way, you will yield a reasonable
4 amount of water. If you're unlucky and hit very few fractures,
5 you will yield very little water.

6 Normally, once you get down to a depth of about 300
7 feet the fractures start closing up on each other. They
8 start squeezing so that they're no longer large enough to
9 yield water. So normally the wells would not go below 300
10 feet.

11 Now, there is another kind of rock on this job. And
12 that's the Martinsburg Shale.

13 Q Tell us about that and its water producing, giving
14 qualities.

15 A Right. That is in the
16 lower right hand corner on the other side of the fault.

17 Q Right. A That is the foothills
18 rock that I mentioned before. Now, that rock is even more
19 minor. That is of very, very minor aquifer in the county.
20 We were not able to find any records of people who had wells
21 within that formation. But according to the literature they
22 would be very low yields.

23 Q Were there any wells that were documented at all
24 in the Chester area? A Yes.

25 Q As far as you know? A There was
some. There were four documented wells in the precambrian

1 rock in the Chester area and those had yields that were able
2 to locate of between forty and sixty-five gallons per minute,
3 which are reasonable yields.

4 Now, there is some, there I discussed both of these
5 rock types as being very poor yielders in general, but there
6 is a difference. There is a major fault that has been
7 plotted in the lower right hand section of the drawing.

8 Q That's the major fault that you referred to earlier?

9 A Yes.

10 Q Now, what are its capacities for producing water
11 so far as you know?

12 A Now, since the
13 potential yield in this kind of rock is a function of the
14 fractures within the rock, and since in the location of this
15 major fault we expect a very, very substantial amount of
16 fracturing, we believe that a high yield of water will be
17 available in the vicinity of the fault.

18 Q Now, there has not yet been mentioned, but, of
19 course, there does exist something known as the Kittatinny
20 limestone formation?

A Yes.

21 Q Tell us first, please, Mr. Salzman, what that is?

22 A It is just as before I was discussing the precambrian
23 rock on this site and the Martinsburg shale on this site. In
24 the general area there is another rock type called the
25 Kittatinny lime stone. I believe it is K-i-t-t-a-t-i-n-n-y,
limestone.

1 That is a major aquifer in northern New Jersey. It
2 extends for quite a ways and because limestone, and this
3 specific limestone tends to have solution cavities within it,
4 it tends to yield very large quantities of water. And
5 certainly it is tapped by various persons and government
6 bodies for potable water supply.

7 Q And what is its physical relationship to the
8 property in question? A It is roughly
9 a half mile to the southeast of this property in a line more
10 or less parallel.

11 Q Now, can you tell us, please, what effect, if any,
12 there is regarding the water flow in the Peapack Brook with
13 regard to the fault that you mentioned previously?

14 A With regard to the fault the Peapack Brook flows over
15 the fault, the major fault that I was discussing and that can
16 been seen in this area in the lower right hand corner of the
17 drawing.

18 Here is the fault line. And here is the Peapack Brook.
19 So it crosses the fault just before the Peapack Brook leaves
20 the property.

21 Now, I can discuss this in general terms and potential,
22 but not in specifics.

23 Q Well, specifically what effect, if any, there is
24 regarding the water flow in the Peapack Brook as applies, as
25 it may apply to the Kittatinny limestone aquifer?

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A That is a much simpler one.

Q Okay. A The Kit --

THE COURT: I am sorry, you may understand what that question means, but I don't.

Q What effect is there on the, of the water flowing through the Peapack Brook upon the Kittatinny limestone aquifer, which is -- A a major water supply.

Q Major water aquifer?

A A major aquifer and some distance from the property in question.

THE COURT: In reference to seepage that might go down in the aquifer.

THE WITNESS: Yes.

THE COURT: All right. Okay.

Q Yes. A First, at the location of this site, the Kittatinny limestone which I mentioned before, which is about a half mile to the southeast of the site, the Kittatinny limestone is not in the Peapack watershed. It is in the Gladstone Brook watershed. As such, it would tend to be influenced by flows to and within Gladstone Brook rather than within Peapack Brook.

Also the Kittatinny limestone is separated from our site by the Martinsburg shale, which I have already said is a very poor transmitter of water. Therefore, there would be

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1 essentially no tendency for water to flow from the Kittatinny
2 limestone toward our site and conversely from our site toward
3 the Kittatinny limestone because there is a barrier in the
4 way. And that barrier is the Martinsburg shale.

5 Now, as one proceeds down stream from our site on the
6 Peapack Brook, one has to go more than half a mile down
7 stream from our site before the Peapack Brook reaches and
8 crosses the Kittatinny limestone.

9 Q What can you tell us as to the depth of the water
10 table on the premises in question?

11 A In general it is more than ten feet and that was by
12 visual and direct physical observation, digging a hole and
13 see whether or not there is water in it.

14 We had exceptions to that and that was at our pits 6
15 and 7, Ward pits 6 and 7, and Jaman's pit 2, where water was
16 encountered as shallow as four feet. Also --

17 Q I'm sorry.

A Excuse me.

18 Q Go ahead.

19 A One would expect as
20 well a very shallow water level within the alluvium or the
21 flood plain of the Peapack Brook. The area shown on this
22 map plotted as AR.

23 Q Now, have you formed any opinion as to the practi-
24 cality of establishing water supply wells on this property?

A Yes.

25 Q And what is that?

A It is my

1 opinion that it is practicable to establish water supply wells
2 within the property to generate the desired water supply.

3 And that the most probable location of these high yield wells
4 would be in the southeast part of the site in the vicinity
5 of the fault.

6 Q Now -- A No, I would like to
7 qualify that, if I may?

8 Q All right. A And that is I do feel
9 that test drilling and pumping would be necessary for final
10 verification.

11 Q What if any suggestion does the State of New Jersey
12 have for total water supply management in a precambrian area?

13 A All right. This is information that I received via a
14 telephone conversation with Mr. Dombrowski of the Department
15 of Water Resources of the State of New Jersey on about April
16 6th of 1976.

17 I called Mr. Dombrowski to discuss the locations and
18 yields of recorded wells in the area. And our discussion led
19 to suggestions that the State of New Jersey had for water
20 supply management in the precambrian rock and Mr. Dombrowski
21 indicated to me that where water is withdrawn from surface
22 or ground supplies and then removed from the area such as
23 via a sanitary sewer, that the total water withdrawal for
24 drought conditions should not exceed a hundred thousand
25 gallons per day persquare mile.

1 Q Do those -- I'm sorry, are you finished?

2 A No. A second condition that he has is that where there
3 is a well and septic tank on the same parcel, that, let's
4 say a single family dwelling, that the acreage for that
5 dwelling should be three to four acres per parcel to protect
6 the quality of the water supply and Mr. Dombrowski reiterated
7 that these are suggestions from the State of New Jersey and
8 in no way are mandated requirements.

9 However, neither of those requirements apply to this
10 site.

11 Q Why? Why is that? A First, we are
12 withdrawing water via wells or would be and then we are re-
13 turning that water to the land via a spray irrigation so we
14 are not removing the water from the area as would be the
15 case if there were sanitary sewers running ten miles to
16 another watershed.

17 And on the other side of the coin, we are treating via
18 tertiary treatment and spray irrigation so that the quality
19 of the supply is being maintained.

20 Q Now, what if anything can you say about on-site
21 water supply wells on this property and its effect on water
22 supplies of existing wells in the immediate area, assuming
23 that they exist? A That would remain an open
24 question. As I said before, the yield of the wells is a
25 function of the fractures that are encountered and cross in

1 yielding. And there is no way of reasonably predicting in
2 advance what fractures that a water supply well on this site
3 may tap, would connect to any other local single house type
4 water supply wells. And it is conceivable that if there is
5 a well, that a major well on this site may tap the same
6 fracture as a single house, a supply well and could conceiv-
7 ably have an adverse impact. But there is no way of being
8 able to predict this in advance. And I would suspect, if
9 anything, would be a relatively small influence.

10 Q And what -- I'm sorry. A Yes. The
11 only way of positively establishing this that I could think
12 of is by literally doing a full scale pumping test and see-
13 ing whether or not it influences any adjacent wells.

14 Q Right. Now, what effect, if any, is the existence
15 or would the existence of that fault on the southeast quad-
16 rant of the property have upon any buildings or pavements
17 which might be built over it?

18 A None whatsoever. Since the fault is totally inactive
19 and we do not expect that fault to move at all in our life-
20 times, or many life times to come, there is absolutely no
21 problem on constructing across that fault with any kind of
22 hard structure. I would have no difficulty with that at all
23 because we do not expect future movement of it.

24 Q Have you formed an opinion as to the erosion
25 potential of the soil types on this property?

1 A Well, they most certainly do have a potential for
2 erosion, particularly when it is disturbed. And there are
3 procedures such as the standards for soil erosion and
4 sediment control in New Jersey as published by the State of
5 New Jersey. And presuming that these provisions are mandated
6 by law are followed, soil erosion sediment control will,
7 well, the control of sediment under the law will occur and
8 be readily designed for.

9 Q Now, Mr. Salzman, there will be testimony later
10 in this proceeding as to the description, the character and
11 location of proposed construction of multi-family dwellings,
12 irrigation spray system and other accessory uses such as
13 tennis courts, perhaps swimming pools or swimming areas,
14 lake things of that kind which will be testified to by, I
15 think, Mr. Rakos. You are familiar, are you not, with the
16 development as he has set it up?

17 A I am familiar with the general plans.

18 Q Right. Now, from a soils and geologic point of
19 view, what evidence is there of any ecological problems that
20 might exist for the development of the program as envisioned
21 by Mr. Rakos?

22 A Well, I can't see
23 any that would be insurmountable from a soil and geologic
24 view point. There is going to be an erosion problem during
25 construction, but with proper design and implementation by
law this can be handled so that from a soil and geologic
point of view I see no, nothing insurmountable on this job.

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MR. LINDEMAN: I have no further questions,
your Honor.

THE COURT: Excuse me. Okay, Mr. Ferguson.

CROSS EXAMINATION BY MR. FERGUSON:

Q Mr. Salzman, when did you complete your final
report?

A That report was submitted
on April 30th of 1976.

Q When did you complete your draft work?

A Perhaps it was a relatively short time earlier.

Q Was that after the commencement of this litigation,
do you know?

A I do not know.

Q Was your report ever presented to the officials
of Chester Township?

A I do not know.

Q In any event, you did not have any participation
in any presenting of your work to anybody in Chester Town-
ship?

A Except to you.

Q That was at the deposition taken in this action?

A That's correct.

MR. FERGUSON: By the way, Mr. Lindeman, are
you going to move your report into evidence?

MR. LINDEMAN: Yes, I am. I didn't know
whether this would be the appropriate time. Do
you want to complete your examination or I will
do it now. I will move it now into evidence.

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MR. FERGUSON: Why don't we mark it and I will examine the witness on it.

MR. LINDEMAN: All right. Okay.

THE COURT: P-4 for Identification.

(The document referred to was marked P-4 for Identification.)

Q Is the map that's in P-4 the same as that map?

A Yes, it is.

Q I am referring now to P-2 in Evidence.

With respect to the Jaman test pits, would you tell us what work you did and what work Jaman did with respect to the Jaman test pits?

A Jaman retained the backhoe operator to excavate the pits. Jaman together with Trenton I understand located the pits.

Q With who? A Trenton.

Q Who is that? A I believe, Jaman can answer that better than I. But there was a representative from Trenton, I believe.

Q From Trenton? A Yes, from Trenton. From the New Jersey Department of environmental protection.

Q Somebody from Jaman and somebody from Trenton?

A Correct. We were not there during the digging of the test pits that are indicated on this map as by Jaman. That is correct.

Q What did you review with respect to those Jaman

1 test pits? A Their logs and locations.

2 Q Where are those logs and locations?

3 A They are contained in a Jaman report which I assume
4 will come up later.

5 Q There is no documentation in your report of those
6 Jaman test pit results?

7 A That is correct.

8 Q The test pit log in the back of your report, pages
9 A-1 through A-10? A A-2 through
10 A-10 of P-4.

11 Q They are only your test pits?

12 A That's correct. Those are the only ones performed
13 under the supervision of Joseph S. Ward, Inc.

14 Q When were the Jaman pits dug?

15 A I do not know off-hand. I would have to refer back to
16 the Jaman report to find out, which I do not have handy.

17 MR. FERGUSON: Your Honor, I think, it
18 appropriate that we have the data which this
19 witness examined with respect to the Jaman pits
20 before we can cross examine, and the report.
21 Certainly before the report comes into evidence,
22 I think, the back up data for the Jaman pits must
23 be attached to it. If the witness has it, perhaps
24 he can supply it.

25 THE WITNESS: I am attempting to find the

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reference to the Jaman report.

It is probably in reference number 13 of page C-1. It is probably in reference number 13 of page number six, C-1, report of the waste water disposal system by Jaman Engineering Associates, February 16, 1976, I assume.

I may have a copy of that report in my brief case, if you would like me to look.

THE COURT: Please do.

Q Please do.

A I have, or I

have a report entitled Application for Consensual Approval for Waste Water Disposal System for proposed attached single family development, Old Chester, Gladstone Road, Chester Township, New Jersey, approving agency, New Jersey Department of Environmental Protection, Division of Water Resources, Public Waste Water Facility element by Jaman Engineering Associates, dated February 16, 1976.

I will now see if this is the report that contains the logs. Yes, it is. The logs are shown in Table 2 of pages 6 and 7 of the report I referenced.

Q All right. On Table 2 on pages 6 and 7, does that contain all the data which you relied with respect to the Jaman test pits? A Plus personal conversations with Mr. Norman Smith.

MR. FERGUSON: Can we have pages 6 and 7 and

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table 2 marked? If it is better mechanically, we can mark the whole document. I am sure it will be offered and probably come in later.

THE COURT: Are you going to offer it?

MR. LINDEMAN: Yes, indeed.

THE WITNESS: This is a marked up copy. I prefer it not --

MR. LINDEMAN: May be we can exchange them later. Perhaps we can use this temporarily.

THE COURT: All right.

MR. LINDEMAN: I didn't bring mine up.

THE COURT: Let's mark it P-5, the pages in question A and B.

Are these just two pages?

MR. FERGUSON: Two pages.

MR. LINDEMAN: Excuse me. Is this the application for conceptual approval or the whole roll?

THE WITNESS: Yes.

MR. FERGUSON: Just the application.

MR. LINDEMAN: Okay.

THE COURT: Mark it P-5 for Identification A and B will be the pages on the test holes. Again, for identification.

(The document referred to was marked P-5 A and B for

1 Identification.)

2 Q Is it correct that the Jaman test pits are by and
3 large on the east side of the Peapack Brook except for --

4 A I believe they're exclusively on the east side of the
5 Peapack Brook.

6 Q And yours are with the exception of your test pits
7 1 and 2 on the west side?

8 A I believe, it is 1, 2 and with number 4 being within --

9 Q You're correct. One, 2 and 3 and number 4 is
10 within.

11 THE COURT: I'm sorry. Did you say all of
12 the Jaman test pits were on the east side of the
13 brook?

14 THE WITNESS: That's correct.

15 THE COURT: Okay.

16 Q And your 1, 2 and 3 are on the east side, your
17 4 in the brook and the rest of yours are on the west side?

18 A Five through 9 are on the west side. That is correct.

19 Q As a soils engineer, is it your opinion that Table
20 2, pages 6 and 7 of P-5 give sufficient and adequate infor-
21 mation for you to evaluate the depth of the bedrock and
22 other appropriate information sufficient to give your opinion
23 which you gave today?

24 A I believe it is
25 to depth to bedrock. And I am afraid I am going to need a
better discussion of other appropriate information. I don't

1 understand that.

2 Yes, but tests from depth to bedrock.

3 Q Would you like to know what other appropriate
4 information is? A I don't understand

5 that.

6 Q All right. On depth to bedrock, what is your
7 definition of bedrock? A My definition

8 of bedrock?

9 Q You have been using today.

10 A That I have been using today. Hard undecomposed
11 material.

12 Q Can you move your bedrock with a backhoe?

13 MR. LINDEMAN: I'm sorry.

14 A No, I cannot.

15 MR. LINDEMAN: I didn't hear the full question.

16 A No.

17 Q Isn't it true that your definition of soil is
18 that material which can be moved with ordinary construction
19 equipment? A Normally, yes. You asked

20 me though about this specific project.

21 Q Sorry, I didn't. I didn't qualify any occasion.

22 You said normally? A Normally, yes, but
23 you asked me about this specific project.

24 Q How, the normal definition that you as an engineer
25 use for bedrock is what? A Soil that is

1 not movable with normal construction equipment. Material
2 I should say. Soil! Material that is not movable with
3 normal heavy construction equipment. However --

4 Q That kind of equipment being a backhoe?

5 A No.

6 MR. LINDEMAN: If your Honor please, I think
7 the answer was not complete.

8 MR. FERGUSON: I am sorry.

9 THE COURT: Normally not movable with normal
10 heavy --

11 THE WITNESS: Heavy construction --

12 THE COURT: -- construction equipment.

13 Was there something you wanted to add to that?

14 THE WITNESS: However, my geologist on this
15 project defined it as material that was, had
16 essentially not undergone substantial decomposition
17 as can be seen by reading our test book logs. And
18 I refer you to test pit 9 of J.S. Ward, Inc., and
19 there are others where there is material that was
20 once rock and is now soil and still maintains the
21 texture of and that we have called soil and not
22 rock.

23 Q I will show you the log of test pit 9 and you can
24 tell me what you mean. That's your test pit 9?

25 A Yes. Test pit 9 does not show rock and yet if you look

1 in the remarks column, you will see that my geologist, Tom
2 Butler, it says, "Inspector T. Butler, is a graduate
3 geologist." He said that there was residual soils with a
4 very slight appearance of clumps of soil being highly de-
5 composed rock, but having no strength.

6 Now, obviously, we are defining that as soil. Some
7 geologist may call that rock, I don't know. Others would
8 call it sacaprolite. S-a-c-p-r-o-l-i-t-e.

9 Q On your test pit number 7, would you look at that?

10 A Yes.

11 Q You get down to six and a half feet?

12 A Yes.

13 Q Or I should say seven and a half feet. It says,
14 "Machine could not penetrate boulders as they were continuous."

15 A Yes.

16 Q Could possible be beginning of bedrock?

17 A Yes, correct. In my interpretation as shown on that map,
18 I indicated at test pit 7 -- let me first find it. Allow me
19 a moment. Here is test pit 7. That rock --

20 MR. LINDEMAN: Excuse me. Indicating where on
21 the map?

22 THE WITNESS: Southwestern. West of the
23 Peapack Brook. Southern third. Test pit number 7
24 shows to be an area where rock I say is greater
25 than five. Therefore, I have to find rock in this

1 zone between a depth of five and ten feet as would
2 be readily apparent by looking at the test pit as
3 an illustration.

4 Yes, I define shallow rock in that area as
5 between five and ten feet.

6 Q Are we talking about bedrock then?

7 A Yes, we are.

8 Q On your log bedrock is indicated because the
9 machine couldn't move the boulders?

10 A It is also indicated because the boulders became
11 continuous and as such the degree of decomposition and the
12 amount of soil present started to diminish. Changed from
13 soil to rock. Soil to bedrock. But you notice still that
14 while we were still digging at seven and a half feet there
15 was still fine sand, silt and clay present between the large
16 pieces.

17 These are not free standing and isolated piece of rock.
18 They are surrounded by fine grain materials.

19 Q At the 8 foot level-- strike that.

20 At the six foot level at test pit number 7 --

21 A Yes.

22 Q What percentage of the soil was fine sand, little
23 silt and clay? A Below the six foot level
24 roughly twenty-five to thirty per cent of the material was
25 sand, silt and clay.

1 Q What's the rest of it?

2 A The rest were boulders and cobbles.

3 Q So seventy-five per cent of it is rock?

4 A Pieces of stone. Let's say stone rather than rock.

5 Q Pieces of stone rather than rock. Is there a
6 difference between stone and rock?

7 A Well, I would like to keep my own mental differentiation
8 if I may.

9 Q Which is -- you just -- so we understand what we
10 are both saying. Stone is pieces of rock and rock is un-
11 fractured continuous rock?

12 A Essentially.

13 Q Is that what you mean?

14 Were there comparatively -- withdraw that.

15 Were the Simpkin, the soil test made with respect to
16 the Jaman test pits? A The Jaman test pits

17 were logged differently from ours.

18 Q How differently and who by?

19 A I believe they are logged by the New Jersey Department
20 of Environmental Protection.

21 Q Do you know who? A Not for certain,
22 no.

23 Q Who logged them. Can you examine P-5 and tell me
24 if that report tells you who logged them and what criteria
25 were used? A This sheet does not tell

1 me who logged them, no.

2 Q The rest of the report, does the rest of the report
3 tell you any place? A I would have to
4 read the report. I do not know.

5 Q How do you know that the same definition of
6 bedrock was used by the people who dug the Jaman holes?

7 A I do not for certain. However, I do know that the
8 geology on both sides of the Peapack Brook are the same.
9 I would and I also know that the same backhoe was used on
10 digging the holes on both sides.

11 I also looked at my logs and see how the soil changes
12 to decomposed rock and changes to rock. And I looked at
13 identical geological conditions from which I reached the
14 conclusion that the depths that the bedrock in both reports
15 is comparable.

16 Q Will you turn to Jaman pit number 9?

17 A Yes.

18 Q Now, Jaman pit number 9, we have on your map an
19 indication of depth to bedrock of greater than ten feet.

20 A Excuse me?

21 Q We have an indication of a depth to bedrock of
22 greater than ten feet? A That is correct.

23 Q Would you look at the log for test pit number 9
24 and tell me if there is information in there sufficient for
25 you to confirm that in fact the depth at location Jaman

1 number 9, the depth of bedrock was greater than ten feet?

2 A On this log it indicates that the hole was excavated
3 to a depth of 10.5 feet and that bedrock was encountered.

4 Q There is a description on the right hand side,
5 zero to six inches black top soil. Six inches to two and a
6 half feet is silt. 2.5 to 3.5 is rock, stiff silt. 3.5
7 feet to five feet is rock sand.

8 Is there any description after five feet?

9 A There is no description after five on that sheet.

10 Q So from 3 to 10.5 the description is rock, sand?

11 A Not necessarily. It is simply not described. It is
12 not logged.

13 Q If it is not logged and not described, then how
14 do you know what it is?

15 A I know what the
16 machine can dig and I know the geology of the area from which
17 I reached a professional conclusion.

18 Q Then your professional conclusion is that if
19 the machine can dig it, it is soil?

20 A No. My professional conclusion is if the same machine
21 is used in the same geologic area and I saw the machine
22 doing one thing in one spot and the machine dug to a similar
23 depth to another spot that the condition at the other spots
24 are comparable.

25 Q So based upon the capabilities of the machine you're
drawing an inference that the depth to bedrock is the same?

1 A No. I'm using the capabilities of the machine as one
2 of several factors.

3 Q The other factor being your justification of
4 stereo-aerial photographs?

5 A That is
6 another factor. Another is my knowledge of the geology of
7 the area in general and it is ^a combination of ingredients
8 that causes me to reach that conclusion.

9 Q Isn't it true that if you were doing a test log
10 as you did them for your test pits, you would describe the
11 material all the way down to the bottom of the hole?

12 A I would probably describe it to the bottom of the hole,
13 it
14 but/would be a function of the purpose as well.

15 Q If the purpose were to determine whether soils are
16 suitable for waste treatment of effluents from a sanitary
17 treatment plan, wouldn't you log it all the way down to the
18 bottom of the hole?

19 MR. LINDEMAN: I object on the ground that I
20 think that is irrelevant in this particular area
21 because I don't know that there is any indication
22 that this sanitary treatment plant is going to be
23 there. So that, I think, it is purely academic as
24 far as this case is concerned.

25 MR. FERGUSON: The spray field will be there.

MR. LINDEMAN: The spray field, right.

Q Not for the purpose of building the plant, for the

1 purpose of building a spray field.

2 A I would think that if it is necessary only to know the
3 soil conditions in the top five feet for a spray irrigation
4 purpose. It would not be necessary to log below five feet.
5 However, if it is necessary to know the information below five
6 feet, it is necessary to log below five feet, then I don't
7 know how I can answer that question.

8 Q All the Jaman logs only go through five feet, is
9 that correct, in terms of the description of the material?

10 A I believe that is correct.

11 Q Do you know whether it is necessary for the purpose
12 of designing or investigating a spray field to go below five
13 feet?

14 A I would assume at times it is
15 necessary to go below five feet. In this specific instance,
16 I do not.

17 Q So your answer is you don't know?

18 A In this specific instance I do not know.

19 Q You were not retained to evaluate the soil or the
20 geology for the purpose of a spray field?

21 A I was retained to evaluate the soil and geology and to
22 see if I could find any potential negative impacts that were
23 irreconcilable and I did not.

24 Q Reconcilable with what?

25 A A spray field is one of the items.

Q Do you have any technical expertise in the field

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Q OF waste treatment?

A A small expertise,

perhaps.

Q Do you recall testifying earlier at the deposition in this case?

A Yes.

Q Do you recall --

THE COURT: Hold it a second. I need the depositions.

At what page are you on?

MR. FERGUSON: Page 93.

THE COURT: Okay.

Q When you were referring to a design prepared by Jaman Engineering Associates I asked you this question.

"Question when you say approved, you're talking about conceptual approval?"

And you gave this answer. "Yes, I should point out that I have no direct expertise in the field of wastewater treatment."

Can you recall stating that?

A Yes.

Q Is that still an accurate statement?

A That is. Well, it is hard to say. I have a small expertise, but I am not a sanitary engineer. So I have some knowledge in the area, but I am not an expert in the area. Does that answer the question?

Q It will have to.

1 So you have no opinion as to the ability of this soil
2 to treat the spray effluent to be sprayed upon it?

3 A Not directly.

4 Q And any indirect opinion you would have, would
5 have to be based upon the work done by Jaman?

6 A Well, I have an indirect, my indirect feeling is that --

7 Q I don't want the feeling. If you can't give an
8 opinion, we don't want you to give it.

9 A I have an indirect opinion.

10 Q Is this an opinion you are willing to state in
11 court? A Yes.

12 Q What is it? A I have -- there
13 are certain soil and rock conditions and decomposed rock
14 conditions beneath the spray irrigation area that will
15 strongly influence a spray irrigation field and the soil
16 and rock conditions are as I have discussed today, and that
17 the soil and rock conditions as I have presented can be
18 relied upon in the evaluation of a spray irrigation system.

19 Q Do you have an opinion as to whether the soil and
20 rock conditions under this tract are appropriate for spray
21 irrigation? A I know of nothing to
22 block them, but I do not have enough direct knowledge of the
23 field to say that this is ideal.

24 Q With respect to the water quality, as long as we
25 are on this subject. Once again, you do not have the

1 expertise to make a judgment as to the preservation of the
2 water quality of the Peapack Brook or the underground water
3 table or supply because of the spray field to be located on
4 the Caputo tract? A I would have to

5 rely on the New Jersey Department of Environmental Protection
6 in that area.

7 Q Mr. Salzman, have you made any investigation of
8 any other sites in Chester Township?

9 A I may have, but none in association with this project.

10 Q Specifically, you said that the property has a
11 high point of plus 672 feet and a low of 346 feet, which
12 would give a relief differential of approximately 332 feet.

13 A Excuse me one moment? That is correct.

14 Q Have you, do you know of other sites in Chester
15 Township which do not have such relief, i.e., which have a
16 relief of less than 332 in order to develop a high intensity
17 use or indeed a spray irrigation tract?

18 A Since I have not examined other sites, I can't
19 respond.

20 Q You said when you were describing the historical
21 geology of the tract that, on this tract we go from foot
22 hills to mountains. Now, that is a reference to the fault
23 and the progression from the Martinsburg shale to the pre-
24 cambrian gneiss? A That is correct. I used

25 that in simplistic terms for lay consumption rather than try

1 to define that and go into the details of the geographic
2 problems and the definition of the changes of foothills to
3 mountains is more a rock type change and it is actually
4 uplands versus Piedmont or highlands versus Piedmont.

5 I'm sorry, I lost the track of the question.

6 Q Precambrian gneiss then is a start of the New
7 Jersey uplands region? A Correct,
8 technically the New Jersey highlands.

9 Q Now, with respect to the slope and topograph of
10 this land. You testified as to where water could be found in
11 the fault because it is a fractured fault, was fractured
12 gneiss and I take it some fractured shale?

13 A That's correct.

14 Q Because there is shale on one side and gneiss on
15 the other? A Correct.

16 Q Where does that water come from?

17 A That water would come from the ground water aquifer of
18 that fault.

19 Q So am I correct in saying that the water has to
20 come along the fault as opposed to perpendicular to the
21 fault? A It would come primarily in a

22 band along the fault which will mean some perpendicular
23 distance, but in a general nature along the fault.

24 Q So the water in effect along the fault would have
25 to come from an area other than the Caputo tract since the

1 fault only cuts across the Caputo tract on the southeast
2 corner?

3 A I would think that some
4 of the water would come from outside the tract, yes.

5 Q Can you estimate how much in your judgment?

6 A No, I would have to do an evaluation.

7 Q How could you do such an evaluation?

8 A I would track the entire watershed of the fault followed
9 by a ground water watershed of the fault, compute and
10 anticipated yield and then prepare an estimate.

11 Q Okay.

12 A And at this stage
13 I couldn't even begin to make a guess.

14 Q That's a very fairly complicated extensive
15 procedure?

16 A Yes, it would.

17 Q In your judgment would a majority of the water
18 come along the fault as opposed to perpendicular to it?

19 A If you're asking me to guess, I will guess. But if
20 you're asking my opinion, I don't know.

21 Q Okay. The water, if we dropped a drop of water on
22 the top here at say Jaman test pit 5 --

23 A Yes.

24 Q -- and that water went into the water table or
25 into the underground to wherever it is going to go where
26 would it go?

27 A That water would
28 seep down through the soil then through, well, presuming,
29 well, the water would hit the surface. It would do one of

1 two things. One of several things would happen. It would
2 evaporate right off the surface. It would flow overland or
3 would seep into the ground. Those are the three possibilities
4 for it.

5 Q Oh, eliminate the first. If it flows overground,
6 where does it go? A If it flows over the
7 ground it would reach Peapack Brook.

8 Q You're aware of the winter of 1976-77?

9 A Yes, I am.

10 Q How -- do you know how long the ground was frozen?

11 A Not directly. I do know the ground was frozen quite
12 deeply. I don't know how long it was frozen.

13 Q So if now would the same answer be true that the
14 water would go overland to the Peapack Brook, if we dropped
15 it at test pit number 6?

16 A Yes, it would.

17 Q Test pit 7? A Yes.

18 Q In fact, would all the down slope to the Peapack
19 Brook, if the water to be sprayed on that piece of ground
20 didn't go into the ground it would flow down to the Peapack
21 Brook? A The entire spray irrigation
22 field as I know it in the surface water shed of the Peapack
23 Brook and if the water flows overland it would flow from that
24 area to the Peapack Brook.

25 Q Okay. Now, if it goes into the ground, what

1 happens to it if that occurs?

2 A If it goes into the ground a portion will be taken up
3 by transpiration.

4 Q Would you explain to the court what that mean,
5 except if that is the same as evaporation?

6 A That is the other half.

7 Q All right. Go ahead.

8 A Transpirations will be taken up by the roots, passed
9 through the vegetation system, whatever it be, then trans-
10 pired or breathed out into the atmosphere through leaves
11 or whatever and would return to the atmosphere in the form
12 of vapor.

13 Q This is how that whole process is, i.e., taking
14 it up in the roots and giving it out to the air depends
15 upon the foliage on the ground?

16 A I am not sufficiently expert to be able to discuss the
17 application, the details, specific quantified application of
18 transpiration.

19 Q All I'm saying if it doesn't go up the roots and
20 into the air through the evapro-transpiration, where does it
21 go?

22 A It seeps into the ground and
23 part of it may be caught in the capillary fringe upon the
24 water table, though the remainder would continue a general
25 downward descent until eventually it reached the ground water
table.

1 Q Which in this tract is where?

2 A The ground water table is generally greater than ten
3 feet below ground surface.

4 Q Referring to Jaman test pits 2, 3, 4, 5, 6, 7,
5 can you tell me if, what happens when the drop of water we
6 are talking about gets down to the water table in that area?

7 A It then starts moving laterally, whether it be in the
8 soil or rock.

9 Q On this tract where does it go, laterally?

10 MR. LINDEMAN: Did you say rapidly?

11 MR. FERGUSON: Laterally.

12 A Most any direction depending on, well, in general the
13 ground water table follows the surface topography, but in a
14 more subdued manner.. Therefore, generally in the specific
15 area in the location you showed the ground water would tend
16 to flow toward Peapack Brook, which is generally westerly.
17 However, I would suspect that a goodly portion may proceed
18 southeasterly. Another portion may actually go under the
19 brook and continue westerly and there may even be some going
20 easterly in opposition to the topography. I have not done
21 a sufficient amount of study to pinpoint that.

22 Q Okay. In general it does follow the topography?

23 A As a general rule, but I cannot say that as a hard and
24 fast as a specific condition.

25 Q Generally the topography of the land does go to the

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Peapack Brook? A Yes.

Q It goes to the south, goes, runs, does it not, into the fault? A Yes.

THE COURT: Let's stop there. My court reporter needs a break. Let's take ten minutes. (A short recess was taken.)

THE COURT: Okay.

MR. FERGUSON: May we have the last question?

THE COURT: You asked about, if the water goes into the fault and he told us.

Q To the extent that the slope and the general water table goes to the fault, doesn't the water either have to go into the fault or then move laterally down to the Peapack Brook? A Since the fracture

pattern in the rock extends to a depth of roughly three hundred feet below present grade, it is really very hard to predict exactly where it is going to go, therefore, all I can do is say that in general it would trend down hill.

Q Wouldn't it be accurate to state that if the fracture pattern is three hundred feet deep it either has to go into the fault or down to the Brook and if it goes into the fault it might be pumped out again by the wells that are sunk in it? A If you're asking is

it conceivable for the drop of water that is part of the spray irrigation to ultimately, eventually / some year reach the

1 fault, it is conceivable. I do not think it is likely.

2 Q The water table flows following the contour of the
3 ground, either down to the Peapack Brook or down to the
4 fault? A Yes, flows in that general
5 direction. It could by-pass though. It could, as I said, it
6 could go in any direction, depending on the fault, the
7 fracture pattern and I can't reach a firm conclusion.

8 Q I understand.

9 If we sink wells in the fault -- back up -- do you know
10 how many wells would have to be sunk to support a population
11 of 2.3 or 3.2 times 856, so say around 2400 people?

12 A Speak to me in gallons not people basis.

13 Q Twenty-four hundred people at hundred gallons a
14 day more or less would be --

15 A Okay. That is about a quarter of a million.

16 Q Approximately 250,000?

17 A That is about, just to take a number off the top of my
18 head, perhaps 170 gallons per minute. The typical wells in
19 this area only are about fifty. But in the fault they could
20 easily be 200. So one well could possibly serve all. However,
21 there would be at least two wells so that a back up would
22 exist. Therefore, I would say probably two, but perhaps
23 three or four.

24 Q When a well is pumping 250 gallons a minute, does
25 it not create a cone of depreciation?

1 A It is not 250,000 gallons a minute. It is roughly 170
2 gallons a minute.

3 Q Two hundred thirty gallons a day. Excuse me.

4 Four hundred seventy gallons a minute would that create a

5 cone of depreciation?

6 A No, a cone is
7 an incorrect word. It would have a zone of depreciation
8 following the fault. However, since we are not dewatering
9 a uniform sand, there is not a cone of depreciation. There
10 is a zone of lowered water.

11 Q If it were uniform sand it would be a cone?

12 A Correct.

13 Q But because of the fault that might throw the
14 cone off?

15 A It would no longer be a
16 cone. It would be a zone.

17 Q All right. There is a zone of depreciation?

18 A Yes.

19 Q Tell us what a zone of depreciation is?

20 A An area where the water level is lower than it used
21 to be.

22 Q If we draw water out of the fault and create a
23 zone of depreciation, does that not invite the water which
24 is in the water table up stream or the upland to fill that
25 zone of depreciation?

26 A The tendency
27 would be in that direction if there is interconnecting
28 fractures. It will tend to flow that way. And if there are

1 interconnecting fractures, it will flow that way. But I can-
2 not answer whether they are interconnecting fractures.

3 Q I understand. And if there are interconnecting
4 fractures and if the water is flowing that way, drawing the
5 water out through the wells will increase the tendency of
6 the water to go into the fault?

7 A Repeat that question. I am sorry. I don't know if I
8 understood it.

9 MR. FERGUSON: Can you read that back?

10 (Last question read by the reporter.)

11 A The tendency will increase the tendency. Whether it
12 actually occurs, I do not know. But if it is clarified,
13 the water is purified, I do not see what difference it makes.

14 Q Excuse me? A If it is clear water
15 and potable water I see no difference. I do not see why it
16 matters.

17 Q You mentioned tertiary treatment in your direct
18 testimony. Is it your opinion that this waste water will be
19 treated by a tertiary process?

20 A I understand that it will receive tertiary treatment
21 prior to spray irrigation, yes.

22 Q That it will be potable when it is sprayed?

23 A That I cannot answer. I do not know.

24 Q What is your understanding of the process?

25 A The specific treatment plant?

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Q Yes. A I have not examined the specific processing. I simply know that it exists in a tertiary system.

Q Would you care to read page 11 through 13 and tell me if that is a secondary or tertiary?

THE COURT: What is he reading?

MR. FERGUSON: P-3.

MR. LINDEMAN: For identification.

MR. FERGUSON: For identification.

A I am insufficiently knowledgeable to reach a conclusion from reading those pages.

MR. LINDEMAN: What?

MR. FERGUSON: That was pages 11 through 13.

Q By the way, if the ground is frozen and if the weather is cold enough so that the spray effluent freezes on top of the ground, what happens when there is a sudden thaw?

A I do not know. However, I do know that in a recent Vermont study you could spray the snow and get major clarification. I have read that recently in a water pollution control federation article. I did not equate it specifically, so I would assume that if it could occur on snow it can occur on frozen ground.

Q Are you aware of the State of Vermont that prohibits the spray irrigation on ski slopes?

A No, I am not. I am only familiar with the study that

1 showed the clarification of the effluent that occurred on
2 snow sprayed with, by spray irrigation.

3 Q You said you had five, you had located or document-
4 ed four wells forty to eighty-five feet deep in Chester
5 Township. Where were those wells located?

6 A In the precambrian rock. I cannot specifically pinpoint
7 them for you now. These were ones coming back to Trenton and
8 they gave us the sources. Mr. Dombrowski was one that
9 located them for me at the Department of Geology. At the
10 water department. Mr. Dombrowski of the Department of
11 Geology, division of Water Resources, State of New Jersey
12 gave me that information. I believe, except --

13 THE COURT: What was the number of wells
14 again?

15 MR. LINDEMAN: Four.

16 THE WITNESS: I do know that Jaman Engineering
17 also looked into wells.

18 Q You're reading from their report?

19 A No.

20 Q From your report? A I'm checking in
21 my report to see if I can find the specific reference where
22 I indicated wells and sources. And perhaps I can rather
23 than trying to talk from recollection. All right. That was
24 those documented wells as contained in the State of New Jersey
25 Division of Water Policy and Supply, special report number

1 25, 1968, pages 12, 13, 21, 22. That is where the wells can
2 be located.

3 Q Okay. You don't know how close they are to the
4 Caputo tract? A No, I do not. They
5 are in the precambrian gneiss. They are in the same geologic-
6 al formation. Off hand I do not know specifically where
7 they are with respect to this property.

8 Q Isn't most of Chester Township in the precambrian
9 gneiss formation? A Since I did not
10 investigate most of Chester, I cannot answer.

11 Q Okay. Now, with respect to the fault where it
12 crosses the Peapack Brook on this southern part of the prop-
13 erty in question, in your report you state that at times of
14 low flow the fault may recharge the brook and at times of
15 high flow, that is, high flow in the brook, the brook may
16 recharge the fault? A That is
17 correct as a tendency and trend, but not necessarily as a
18 fact.

19 Q It depends upon the particular geologic or hydro-
20 logic factual pattern existing at any one time?

21 A That's correct. And it may at the crossing of the
22 Peapack Brook and the fault on this site there may actually
23 be no transfer of water at any time. I simply cannot answer.
24 Or may be transfer the water once a year, once every ten
25 years or everytime it rains. I simply cannot answer. I

1 don't know. All I can respond to is that the tendency for
2 something that may occur.

3 Q Would the same be true of the Kittatinny limestone
4 aquifer where it crosses the Peapack Brook would be a half
5 mile to the south? A Again the tendency
6 and trend would be the same.

7 Q So that in periods of low flow of the brook the
8 limestone aquifer could recharge the brook and put water
9 into it? A And conversely in periods
10 of high flow water from the brook could go into the limestone
11 aquifer A Those words, could, yes,
12 but the word could in your question, the answer is yes.
13 Whether it does, I do not know.

14 Q So in point there is a potential then at the
15 intersection of both the fault and the Kittatinny limestone
16 for an interchange of water between the ground water in those
17 two areas and the brook? A That is correct.

18 Q You testified that the potential for erosion was
19 presented with the, with respect to the development which
20 you said you were familiar? A Yes.

21 Q Where can you break down the potential and quanti-
22 fy it or qualify it in any more detail with respect to the
23 west side and the east side of the Peapack Brook?

24 A You know I did not do a detailed erosion potential
25 evaluation of this property. I simply noted that the

1 potential for erosion does exist, that the soils as
2 qualified by the Soil Conservation Service have a specific
3 erosion potential and that engineering and agricultural
4 procedures exist as mandated by the New Jersey Department of
5 Environmental Protection that can control that erosion and
6 keep it within legal limits.

7 Q Are those procedures that are mandated applicable
8 to all soils in the Chester area or just to certain specific
9 soils?

10 A They are applicable to
11 all soils in the State of New Jersey.

12 Q Is the extent of the measures which must be taken
13 to control erosion dependent in whole or in part upon the
14 slope and topography of the tract?

15 A That is one of the factors that enters into the design
16 of the sediment control plan.

17 Q Would it be safe to say that if it were a flat
18 piece of ground you would have much less erosion potential?

19 A With all other things being equal, flatness of the land
20 the less potential for erosion.

21 Q And if you had soil as to which there were not the
22 same degree of erosion potential as determined by the
23 Soil Conservation Service, all other things being equal, I
24 wouldn't have to use as much measures or mechanisms to
25 control erosion?

A That is correct.
The procedures as established will bring everything down to

1 the point ground zero. So that more may have to be done to
2 control under certain circumstances, but as an end product
3 soil erosion sediment control would wind up the same, thus,
4 if you have a flat site you would do very little and,
5 therefore, have one pound of sediment coming off the
6 property, let's say, while on ^a steeper piece of land you would
7 do more. So that as an end product you have only one will
8 be coming off the land.

9 Q It is true, is it not, that the less you have to
10 do the less it costs a developer in terms of erosion
11 control?

A That depends.

12 MR. LINDEMAN: Your Honor please --

13 MR. FERGUSON: I'll rephrase it.

14 MR. LINDEMAN: That is all right. Go ahead.

15 Q Isn't it the measures which are needed to control
16 erosion are an expense to anybody that is going to develop
17 the land?
18 A It is always an expense
19 to do anything, yes.

20 Q It is more of an expense to develop the Caputo
21 land because of the topography and the soils when we are
22 talking about erosion than it would be to develop a flat
23 piece of ground, if we could confine it to Chester Township?

24 MR. LINDEMAN: If your Honor please, the
25 inquiry is interesting. It's, I dare say, without
being argumentative, it is probably obvious. But

1 I think I really must object to this line of
2 questioning for the reason that the witness is not
3 qualified, or I haven't qualified him on this
4 point.

5 I am happy to hear his views as to whether
6 it is more expensive to move land around or not,
7 but I don't think that it has been presented for
8 that purpose.

9 THE COURT: Well, if it would be phrased so
10 there would be more work required as opposed to
11 greater costs, that the conclusion, if it could
12 be qualified to rather than refer to more costs,
13 make it refer to more work to be done, then I will
14 allow the question.

15 Q I will rephrase the question to ask you whether
16 more work must be done on the Caputo site because of the
17 type of soils and the topography than would have to be done
18 if the Caputo site were a flat piece of ground with different
19 soil?

20 A With the term with
21 different soils, it would depend what the different soils
22 were, so I couldn't answer on that regard.

23 Q Okay. I will accept that. Tell us about the
24 topograph.

25 MR. LINDENMAN: If your Honor please, I object
on the further ground that there ought to be some

1 foundation or some hypothesis presented to the
2 witness as to what land or dirt has to be moved
3 around and for that purpose. This witness hasn't
4 testified to any and indeed I offer the court that
5 it is our intention to show that there will not
6 be the requirement of extensive preparation in the
7 form of moving dirt around.

8 THE COURT: As I understand his testimony,
9 he is telling me that there are erosion control
10 standards in the State of New Jersey and these
11 standards are sufficient to control any soil
12 erosion that could occur on the site, is it not?

13 MR. LINDEMAN: Yes, he is and he has so
14 testified.

15 THE COURT: Right. Okay. Now, if he is
16 going to tell me that then I think the defendant
17 has the right to explore the area that he is in
18 right now.

19 MR. LINDEMAN: Well, because his statement
20 is a very broad statement without, I grant you,
21 without any underlying qualification.

22 THE COURT: But you're the one that asked
23 the question to start with in the beginning and
24 we are getting into his -- I think it is proper.
25 I think it is proper with the dirt, it is proper

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cross examination.

MR. LINDEMAN: I concede that, your Honor. I want to keep the light of day in this whole case. It is just when you say will the moving around of dirt or the surface involve greater expense. It seems to me that something should be put -- of course, more work.

THE COURT: More work, right.

MR. LINDEMAN: That some kind of hypothesis ought to, or some kind of foundation should be laid as to what kind of thing has to be done or what criteria, what the state may impose. It might not involve earth work or moving of the earth. I don't know.

THE COURT: He has told me, you know, the question will be meaningless unless I found out about these standards.

MR. LINDEMAN: Right.

THE COURT: Okay.

MR. LINDEMAN: I agree.

THE COURT: But right now your witness has said with these standards that it is controllable. All right. He is asking with respect to more work on another site within these standards, as I understand it.

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MR. LINDEMAN: I did not understand it that way.

MR. FERGUSON: That's correct.

MR. LINDEMAN: That's quite --

THE COURT: I think, its got to be set within that framework.

MR. FERGUSON: Yes, sir.

THE COURT: If you want to go outside the standard, then I think it is wrong, the standard that you cited.

Let's go back and try the question all over again so you can get the proper framework and I can get the proper framework.

As I understand it, Mr. Ferguson, you say if he found flatter land with different soils conditions or the same soil conditions?

MR. FERGUSON: The same soil conditions.

THE COURT: Okay. Would it involve more work than the work on the Caputo site for soil erosion?

MR. FERGUSON: That's correct.

THE WITNESS: If we start by the assumption that the land is disburbed --

THE COURT: If you start with the assumption what?

1 THE WITNESS: That the land is disburbed,
2 somebody takes a bulldozer and scrapes the land,
3 scrapes all the vegetation away, and therefore,
4 exposes the raw soil, with that assumption, then
5 the flatter the land the less work that need be
6 done for soil erosion control.

7 Q And the less you disturb the land, in any event,
8 the less you have to do to control the erosion?

9 A That is obvious. And, as a matter of fact, it is one
10 of the criteria under the standards of soil erosion and
11 sediment control in the State of New Jersey that not more
12 than a certain amount of land, as little land at one time
13 is disturbed as possible.

14 Q Are you familiar with the method of constructing
15 the spray field on the eastern side of the Peapack Brook?

16 A Vaguely.

17 Q Vaguely?

A Yes.

18 Q What will they be?

A That

19 certain pipe lines will be installed with heads on them and
20 that sprays will occur from those heads on to the ground.
21 And I understand there are some sort of earth work on the
22 east bank of the brook, but I'm very, very unsure of just
23 what is occurring there.

24 Q Are you aware of the method of proposed construction?

25 A There will be a lake --

1 Q No, not what will be built, but the way and the
2 manner in which it is to be built and the precautions to be
3 taken against erosion? A I do not.

4 Q Are you aware that there is a proposal to move a
5 stream along the eastern, northeastern edge of the property
6 along Fox Chase Road? A I recollect
7 reading in one of the Jaman reports that a stream relocation
8 is part of the plan.

9 Q You mentioned that in your conversation with Mr.
10 Dombrowski the state recommended that if a private well and
11 individual sanitary disposal system is to be used, they
12 recommend that each dwelling should be on a three or four
13 acre lot? A Yes.

14 Q Did they tell you why they made that recommendation?
15 A To preserve the quality of the water.

16 Q To prevent contamination of the drinking water
17 from the septic system? A Yes.

18 Q Is that all over New Jersey or is that in any
19 specific area? A That is a state
20 recommendation for the precambrian gneiss that occurs in the
21 State of New Jersey.

22 Q Would that include -- it doesn't -- does it
23 include, does it not, the Caputo tract?

24 A The Caputo tract is precambrian gneiss.

25 Q Do you know what the rest of Chester Township is?

1 A No.

2 THE COURT: I think he already told us that
3 he didn't make a study.

4 MR. FERGUSON: Yes.

5 Q You're not aware from your geological knowledge
6 whether the entire township is by and large precambrian rock?

7 A I would -- no, it is not precambrian rock because I
8 know the Gladstone Brook, which is right near by, has the
9 Kittatinny limestone, which is certainly not precambrian.
10 That is southeast of the --

11 Q I'm not sure that is Chester Township.

12 A All right. I also see that the southeast corner of
13 this property is the Martinsburg shale, and, therefore,
14 there has to be Piedmont within Chester Township to the
15 southeast and other formations other than the precambrian
16 in the southeast of Chester Township.

17 THE COURT: Excuse me. Aren't we speculating?

18 MR. FERGUSON: He has told us -- withdraw
19 the question.

20 THE COURT: Okay.

21 MR. FERGUSON: I am not...

22 Q In paragraph one of your conclusions on your
23 report you state that the recommendation of Mr. Dombrowski
24 will not apply because of the spray irrigation system which
25 will put the water back into the ground from which it came.

1 A That is one of the points that I, that one, the point
2 that I bring out is one of the two points I bring out, because
3 Mr. Dombrowski raised two separate points and I responded to
4 each separately.

5 Q With respect to the first though, about replacing
6 the water through the spray irrigation system, I'm not quite
7 sure it follows because if the water from the fault is
8 pumped out and it is not necessarily true that the water
9 that goes back in is going to go back into the fault. There
10 doesn't seem to be an equation.

11 A We are referring to the regional system, not necessarily
12 the Peapack Brook. But it doesn't, but the brook joins and
13 forms the river and, I believe, in the Raritan Basin. I am
14 saying your water management, total water management system
15 of the Raritan Basin is uninfluenced.

16 Q So it is your conclusion that the equations made
17 that water taken out is put back is on an area or on a basin
18 wide basis, or river basin or watershed basis and not on the
19 specific tract site?

20 A That's correct. We are not withdrawing water. As I
21 mentioned before the fault does draw water from outside the
22 property lines to some degree and the spray irrigation is
23 putting that water back exclusively within the property lines,
24 but some of the water may eventually find the fault that
25 leaves the property line. So I cannot conclude conclusively

1 that the balance within the property lines are maintained,
2 both within the basins they certainly are.

3 Q With respect to your other points, that is water
4 quality. I believe, you told us before, correct me if I am
5 wrong, that you did not have an opinion as to the efficiency
6 of the Caputo's soil on the tract to remove all the
7 pollutants from the water, is that correct?

8 A That's correct, except as I recollect reading the
9 percolation tests performed by Jaman, which to my knowledge,
10 appeared to be in the proper realm. Neither too fast nor
11 too slow.

12 Q For this statement and for all your statements
13 about water quality made in your report, you're relying on
14 Jaman Engineering? A That is
15 correct.

16 Q Just for a minute, going back to the bedrock.
17 It is true that you yourself or your firm did not verify
18 the test pits done by Jaman? A By verified,
19 we were not present while they were being dug.

20 Q All right. You infer that the same or appropriate
21 procedures were used because the same backhoe was used plus
22 you reached that conclusion because of your interpretation
23 from the aerial photographs?

24 A Plus -- right -- plus the similar geology as occurred
25 in our test pits.

1 Q By similar geology, what do you mean?

2 A Where in the precambrian gneiss within a very short
3 distance.

4 Q So you are inferring that because it is all pre-
5 cambrian gneiss, the general characteristics are all going to
6 be the same? A Within a short distance
7 I would expect them to be, yes.

8 Q But it is true that if the -- withdraw that.

9 It is true that the Jaman pits did not go below five
10 feet? A That is untrue.

11 Q In terms of the description of the material taken
12 out. A From the logs that you showed
13 me the material was not described in the field from five feet
14 to the bottom of the pit.

15 Q Have you asked the person who observed those Jaman
16 test pits what their definition of bedrock was?

17 A No. I did ask why the logs stopped at five feet.

18 Q What were you told?

19 A That is what the man from the DEP wanted.

20 THE COURT: Pardon?

21 THE WITNESS: That's what the man from the
22 DEP wanted.

23 Q Who is the man from the DEP?

24 A I don't know for sure.

25 Q Excuse me? A I do not know

1 for sure.

2 Q You think you know? A If you
3 give me about five minutes with my files, I think, I might
4 be able to find the name.

5 THE COURT: Not necessary.

6 THE WITNESS: Not that important, is it?

7 MR. FERGUSON: Not now.

8 THE COURT: Gentlemen, could I see you just
9 a minute before you start?

10 MR. FERGUSON: I have just a few more.

11 (Discussion had at side bar.)

12 Q Do you accept the description of the soil survey
13 of Morris County, New Jersey document issued in August, 1976,
14 by the United States Department of Agriculture and Soil
15 Conservation Service in connection with the New Jersey
16 Department of Agriculture and the New Jersey Agricultural
17 Experiment Station as containing agricultural descriptions
18 of the soils on the Caputo tract and particularly Parkerville
19 soils, the Edneyville soils and Parker-Edneyville soils?

20 THE COURT: I got to get that down.

21 A Parkerville soil. What was the other?

22 MR. FERGUSON: Edneyville, E-d-n-e-y-v-i-l-l-e,
23 soil and Parker-Edneyville soil.

24 THE COURT: All right, go ahead.

25 A I will accept that those are the soils at this site and

1 the SC3 report is accurate in this regard, but I will disagree
2 with their characteristics on this site as will be, as was
3 indicated to be by the gentleman who prepared this report in
4 April of this year. And he said that there has to be site
5 specifications and site specifications would take control
6 and that his study is only to a depth of five feet.

7 With those qualifications, yes, those are soil types
8 that occur on this project.

9 Q Pick out the description with which you disagree.

10 A The soil description?

11 Q Yes.

12 A Oh. The soils are described. Well, it is their property I disagree with.

13 Q Pick the property that you disagree with.

14 MR. FERGUSON: And perhaps we should mark
15 this.

16 THE COURT: All right.

17 Q After you are given the opportunity to pick it out
18 we will mark it as D-1 for identification.

19 A Could you start out by giving me a map, a soil map of
20 the property? I believe one exists, so I can see what is
21 where.

22 Q May be you can find it. We will give it to you.

23 A Because each of the soil terms that you mentioned has
24 a series of bearings, so I would have to know too by symbol-
25 ing exactly what you are speaking of.

1 Q Well, Parkerville soil.

2 A I notice five Parkerville soils contained in this
3 report. Parkerville soils I assume you mean.

4 Q I show you figure 3, the soil map from exhibit
5 P-5 for identification.

6 A Just to pick an
7 area, I see PBD soil and PED. Let's see if I can find those
8 symbols in this report now. Okay. Here is a PD, cap P,
9 small b cap D. That appears to occur here. And I notice
10 here it says that septic and absorption are zero because of
11 steep slopes.

11 I would disagree with that.

12 Q Why do you disagree with it?

13 A Because I have seen the result of percolation tests.

14 Q Where?

15 A In the Jaman Engineer-
16 ing report.

17 Q And the Jaman Engineering report, how many perco-
18 lation tests were done on PBD soil?

19 A I do not know specifically.

20 Q How do you know when you made that statement that
21 any were done in the PDB -- PBD soil?

22 A I know that representative areas as chosen by the New
23 Jersey Department of Environmental Protection indicated this
24 type of situation and, therefore, I concluded that they
25 selected a reasonable cross section of the site which would
tend to include this. It was an assumption on my part. Not

1 a fact.

2 Q So if the DEP person was wrong and didn't percolate
3 those soils, nobody knows?

4 A I would, aside from surface slope, it would appear
5 from our pits any way that the nature of the soil is
6 exceedingly similar on this project. That the difference
7 appears to occur primarily in the slope, not in the gradation
8 of the soil. The slope of the land rather than the gradation
9 of the soil appears to be one of the principal factors in
10 differentiating the different types of soil we have here.
11 And as long as the gradation of the soil is similar, I
12 would suspect similar percolation characteristics.

13 Q If the slope is steep enough, water never gets
14 into the soil, isn't that correct?

15 A I would assume that one could find a slope at which
16 the soil would, that the water would not enter the slope,
17 yes.

18 Q Isn't it the rate at which the water enters the
19 slope a function of the slope itself?

20 A That is one of the factors that enters into it, but
21 there are many, many factors that enter into it.

22 Q Vegetation cover? A Smoothness of
23 the ground or lack thereof. There are many, many factors.

24 Q Go to the EBC, which is in Edneyville.

25 A Be EDC perhaps.

1 Q Is that a D or E? A EDC,
2 Edneyville soil. Here it would depend to the degree that
3 the septic tank and absorption filtrations are moderate and
4 that the bedrock is at a depth of six to ten or more feet.
5 And because of the slope when one designs a septic tank, one
6 has to be careful, obviously one always has to be careful
7 in the design of septic tank systems. However, here I would
8 be more in agreement with the report of the SCS in that they
9 say that there is, it is generally pretty good in the EDC
10 soil.

11 Q How about the PEC. A We are
12 back in the Parkerville. P sub e C. Again, I would go
13 back and say once more, moderate septic tank problems which
14 I would tend to agree with in that one has to be careful.
15 But I think if one took Morris County, one would find the
16 average to be moderate to zero in Morris County.

17 I happen to have personal knowledge in Randolph Town-
18 ship. It is more often zero than any other classification
19 and so moderate strikes me as being pretty darn good
20 conditions.

21 Q Okay. Any other soils on the east bank that the
22 description of which you disagree with?

23 A I would have to go through one by one and if you like
24 me to, I will. I would have to get the tabulate them all
25 and then go into this book and do a specific check on each

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and everyone.

Again, this report that you have in your hand is intended as a general idea and is not intended to base a design upon. And I would appreciate it if you speak with the man who prepared it so that he would say that to you.

Q Would you agree or disagree with paragraph 13 on page 10 entitled Parker-Edneyville association?

THE COURT: You say page 13?

THE WITNESS: He said page 10 item 13 entitled Parker-Edneyville association.

I would agree in part and disagree in part.

Q What would you disagree with?

A I disagree that a, that it is excessively drained.

Q Anything else?

A There is a general statement in here that it is unsuitable for farming and that I am not qualified to respond to.

There is a statement that it is severely limited for intensive community development. And I don't know that I know what that means. But I would doubt it.

Q How about the next sentence?

A It is suited to open space activity and to the protection of the watershed. I would agree to that, but then again, I doubt if I could find anywhere in Morris County where I would disagree with that.

MR. FERGUSON: Mark this D-1.

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MR. LINDEMAN: D-1?

THE COURT: Inside the first page. I think I did that.

(The document referred to was marked D-1 for identification.)

MR. FEAGUSON: I have no further questions, your Honor.

MR. LINDEMAN: If your Honor please, I have no further questions at this time. I will, of course, reserve the right, although, I think, I need state it at this time to call the witness back for rebuttal, if necessary.

THE COURT: All right. You can step down. Thank you.

All right, I think that is it for the day. Make it about 11:15 on Monday, if you will. That will adequately give me an opportunity for the calendar call. Thank you.

Have a nice week-end.

MR. LINDEMAN: Same to you.

THE COURT: The stone will be marked C-1 for identification.

(The stone referred to was marked C-1 for identification.)

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PENGAD CO., BAYONNE, N.J. 07002 FORM 2046

C E R T I F I C A T E

I, Earl C. Carlson, certify that
the foregoing is a true and
accurate transcript of the testimony
and proceedings in the above entitled
cause.

Earl C. Carlson

Date:

1/30/79