

SUPREME COURT OF THE UNITED STATES
NO. 141, ORIGINAL

STATE OF TEXAS,)
)
 Plaintiff,)
)
 VS.) VOLUME IX
)
 STATE OF NEW MEXICO)
 AND STATE OF COLORADO,)
)
 Defendants.)

TRANSCRIPT OF PROCEEDINGS

The above-entitled matter came on for HEARING before HONORABLE MICHAEL A. MELLOY, SPECIAL MASTER, held REMOTELY via Zoom, on OCTOBER 19, 2021, commencing at 11:01 a.m.;

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1 **JUDGE MELLOY:** All right. This is Judge
2 Melloy, and we're on the matter of the United States
3 Supreme Court Original No. 141, Texas versus New
4 Mexico and Colorado with United States as intervenors.
5 Let me ask the parties who will be participating in
6 this morning's session to please enter their
7 appearance. For Texas, Ms. Barfield?

8 **MS. BARFIELD:** Good morning, Your Honor.
9 This is Theresa Barfield on behalf of the State of
10 Texas.

11 **JUDGE MELLOY:** For New Mexico?

12 **MR. DRAPER:** Good morning, Your Honor.
13 This is John Draper on behalf of State of New Mexico.

14 **JUDGE MELLOY:** And United States?

15 **MS. COLEMAN:** Good morning, Your Honor.
16 It's Judith Coleman from the Department of Justice for
17 the United States.

18 **JUDGE MELLOY:** And for Colorado?

19 **MR. HARTMAN:** Good morning, Your Honor.
20 Preston Hartman for the State of Colorado.

21 **JUDGE MELLOY:** All right. When we left
22 off last night, we had pending motions relating to
23 Texas Demonstrative Exhibit 72; Texas Exhibit 702,
24 which is the document purportedly coming from the New
25 Mexico State Engineer; US-307, which is the report

1 from Dr. Harshbarger on -- excuse me --
2 Dr. Miltenberger on provenance; and then Texas 1204,
3 which is a document from Harshbarger & Associates.
4 Let me say this, I believe that based upon my review
5 of the relevant documents, I'm going to admit US-307.
6 I'm also going to admit Texas Exhibit 702. I believe
7 it does indicate that it is a document that came from
8 the New Mexico State Engineer's Office; however, in
9 admitting it, I'm going to admit it for a very limited
10 purpose only and give it whatever weight I think it
11 ultimately should be given, which may not be much
12 without some further clarification of exactly who
13 wrote this document, but it seems to me that it's
14 pretty clear that it comes from the State Engineer's
15 Office, but I find it unusual that we don't really
16 have reference to it until we see this Harshbarger
17 Exhibit 1204, which I'll -- I will also admit. That's
18 three years after the fact, 1985, and the Harshbarger
19 exhibit seems to be referring to two different
20 documents, a draft report from the state engineer's,
21 which I believe is 702, and a report from the
22 International Boundary and Water Commission, which I
23 think is in response to the 702 report. So at this
24 point, I think there's sufficient foundation and
25 relevance to admit the document; however, I'm only

1 going to admit it at this point to show that the issue
2 of the interconnection between groundwater and surface
3 water and return flows was a matter of active
4 discussion at and around the time period of this
5 memorandum, which I believe is 1982, through at least
6 1985. I think the evidence shows it'll be quite a bit
7 beyond that, but at this point, I'm only going to
8 admit it to show that the interconnection was a matter
9 of discussion, and quite frankly, some controversy
10 because the Harshbarger memo indicates they don't
11 agree with -- with the memo, and they think the
12 effects of groundwater pumping are different than what
13 the memo indicates. So at this point, without further
14 clarification whether this is even a final document,
15 whether it's clarification as to who wrote it, whether
16 it's an official position of the New Mexico state
17 engineer, whether it's a draft or final document, as I
18 say, I think I need a lot more information before I
19 give it any weight beyond that it shows that this
20 issue was a matter of discussion. So for those
21 limited purposes only, 702, 1204, US-307, and
22 Demonstrative 72 will be admitted.

23 **MS. BARFIELD:** Thank you, Your Honor.

24 **JUDGE MELLOY:** All right. We'll get
25 back to Dr. Miltenberger's testimony. I do need to

1 remind Dr. Miltenberger that he's still under oath,
2 and you may proceed, Ms. Barfield.

3 **MS. BARFIELD:** Thank you, Your Honor.

4 **SCOTT MILTENBERGER,**
5 having been previously duly sworn, testified further
6 as follows:

7 **FURTHER DIRECT EXAMINATION**

8 **BY MS. BARFIELD:**

9 **Q. Dr. Miltenberger, let's start with pulling up**
10 **Texas 1206. Could you grab that in your binder?**
11 **Since we were just talking about US-307 and Texas 702,**
12 **I want to go ahead and clean up this remaining issue**
13 **on that topic.**

14 **A. That was Texas 1206?**

15 **Q. 1206, yes.**

16 **A. I'm looking at the binders now.**

17 **Q. It is also up on the screen if that's helpful**
18 **to you.**

19 **A. I think so, because I'm not seeing it in the**
20 **binders here.**

21 **Q. Okay. And I also want to refer you to**
22 **US-307, which is your November, 2016, provenance memo**
23 **regarding the 1982 document. Do you need to look at**
24 **that, as well?**

25 **A. Yes, please.**

1 Q. Okay. If you could grab that one from your
2 binder and then you can look at 1206 on the screen and
3 the provenance menu -- memo, US-307, in the binder.
4 Thank you.

5 A. That doesn't appear to be in the -- oops,
6 excuse me. There's one other binder here. I have it.

7 Q. Okay. Thank you for that effort,
8 Dr. Miltenberger. Okay. So focusing quickly on the
9 US-307 provenance memo that was just admitted into
10 evidence, down towards the bottom of Page 1, there's a
11 reference, of course, to what you testified about
12 yesterday of three documents in the repository that
13 you were visiting. It says, "Of these other
14 documents, a July 15th, 1985 memorandum to Friedkin
15 from Wootton, with the subject, "Effects of Pumping on
16 Rio Grande Flows," clearly identifies the document in
17 question," and then there's more to continue on the
18 next page. Your reference in Exhibit US-307 to the
19 July 15th, 1985, memorandum, is that referable to
20 Exhibit No. 1206, Texas 1206?

21 A. Yes.

22 Q. Okay. And you collected Texas 1206 during
23 the visit in question; is that correct?

24 A. That's correct.

25 Q. In conjunction of your analysis with the 1982

1 document that's marked and admitted for the limited
2 purposes as articulated by the Court, this is -- this
3 is the document, 1206, that you found Texas 702
4 attached to; is that correct?

5 A. That's correct.

6 Q. Okay.

7 MS. BARFIELD: Your Honor, I would move
8 to admit, in addition to the other documents we talked
9 about this morning, Texas 1206.

10 MR. DRAPER: No objection, Your Honor.

11 JUDGE MELLOY: Sorry. I think I was on
12 mute. 1206 is admitted.

13 MS. BARFIELD: Oh, thank you, Your
14 Honor.

15 Q. (BY MS. BARFIELD) And, Dr. Miltenberger,
16 looking specifically at 1206, is there language within
17 Texas 1206 that supports your conclusion as an expert
18 historian that Texas 702 was attached to Texas 1206 in
19 the archives where you located the documents?

20 A. Yes.

21 Q. Can you focus the Court, please, to the
22 language that you're referring to?

23 A. Yes. That appears in the first sentence of
24 this memo, "The Commissioner and staff met with
25 Technical Advisor Harshbarger on June 25th, 1985, to

1 discuss the U.S. Section's position on the paper from
2 the New Mexico State Engineer's Office, Rio Grande,
3 Elephant Butte Dam to El Paso, Texas, copy attached."

4 Q. Okay. And it's on that basis -- am I correct
5 that it's on that basis that it is your expert opinion
6 that Texas 702 was, in fact, attached to Texas 1206?

7 A. Yes.

8 Q. Okay. And does this language inform your
9 opinion wherein you concluded that the Texas 1206 --
10 I'm sorry -- Texas 702 was authored by New Mexico
11 Office of State Engineer?

12 A. Yes.

13 Q. Okay. And let's go ahead and complete this
14 set of documents. Could you also look at 1205 while
15 you have that binder out?

16 A. Yes.

17 Q. And what is 1205, Texas 1205?

18 A. Texas 1205 is a memorandum from Thomas
19 Wootton to George Baumli with the subject, "Effects of
20 Pumping on Rio Grande Flows," in which Mr. Wootton is
21 providing information to George Baumli, including
22 reference to -- as part of that transmittal, he makes
23 a reference to the statements given in the New Mexico
24 State Engineer's Office paper, Rio Grande, Elephant
25 Butte Dam to El Paso, Texas.

1 Q. All right. And referring back to the US-307
2 memorandum, is this the document you refer to in the
3 memorandum, the third document that you collected at
4 the same time that you collected Texas 702?

5 A. Yes.

6 Q. Okay. And you reviewed this document,
7 obviously, and you rely upon this document in support
8 of your opinions?

9 A. Yes.

10 MS. BARFIELD: Your Honor, I would move
11 to admit Texas 1205.

12 JUDGE MELLOY: Any objection?

13 MR. DRAPER: No objection, Your Honor.

14 JUDGE MELLOY: 1205 is admitted.

15 Q. (BY MS. BARFIELD) Is there anything else
16 you'd like to share with the Court, Dr. Miltenberger,
17 in terms of how this document, Texas 1205, informs
18 your opinion on this subject?

19 A. No.

20 Q. Okay. So let's move back to the last couple
21 of slides in your PowerPoint presentation, and you
22 were on -- about to discuss Demonstrative No. 72. On
23 the left-hand side of this page is the document that's
24 just been admitted, Texas 0702; is that correct?

25 A. Yes.

1 **Q. Okay. And there are two callouts on**
2 **Demonstrative No. 72. Did you choose these callouts?**

3 A. Yes.

4 **Q. And they're from document Texas 702?**

5 A. Yes.

6 **Q. Okay. Could you share with us the**
7 **significance of the first callout to your opinions**
8 **regarding Texas 0702?**

9 A. Yes. The first callout identifies what the
10 effort was that resulted in this particular report.
11 It describes a study of streamflow depletion between
12 Elephant Butte Dam and El Paso, a study that was
13 undertaken using -- using double mass diagrams and a
14 stream flow correlation, both of which having been
15 prepared from stream discharge records so what the
16 basis of the study was.

17 **Q. Let's go ahead and discuss the second**
18 **callout. What is the significance of the second**
19 **callout to your opinions regarding this document?**

20 A. Well, the second callout describes on the
21 basis of that study a finding. The -- the report, in
22 having performed this study, identifies certain
23 periods of time, and in this one, it identifies a
24 third period that began in 1951 and corresponded with
25 a period in which surface -- the water supply

1 available from Elephant Butte Reservoir was very low,
2 indicating that the drought, and that continued
3 through 1957. This paper goes onto then observe that
4 during that period, groundwater development was
5 undertaken on a supplemental basis but that, as it
6 states here in the last -- second-to-last sentence,
7 "This groundwater development has changed the flow
8 regime established prior to 1951 such that a greater
9 release is required from Elephant Butte Reservoir to
10 achieve the same flow at El Paso." And then it goes
11 onto note that this is a new trend that was
12 established after the end of the drought and has
13 continued to the present, which it identifies as 1982.

14 **MS. BARFIELD:** Your Honor, I'd move to
15 admit Demonstrative No. 72.

16 **JUDGE MELLOY:** I think I already
17 admitted that, but if not, it's admitted.

18 **MS. BARFIELD:** Thank you, Your Honor.

19 **JUDGE MELLOY:** I already admitted it.

20 **MS. BARFIELD:** Could we take a look at
21 Demonstrative 73, please?

22 **Q. (BY MS. BARFIELD)** Okay. On Demonstrative 73,
23 Dr. Miltenberger, on the left is, again, the source
24 document, Texas 702, the two callouts that you just
25 talked about, and then this -- this demonstrative

1 appears to add a graph on the right-hand side. What
2 is that? And I'm asking not -- I'm not asking for an
3 interpretation of the graph as a technical expert.
4 I'm asking for what it is in your analysis as a
5 historian.

6 A. I understand. The figure that's depicted at
7 right, I understand to depict graphically what is
8 presented textually in that second callout, an
9 assessment of graphical depiction of the phenomenon
10 described as occurring in this third period.

11 Q. So overall, between the text of the document
12 itself, the callouts that you've just identified, and
13 -- and with the addition of this graph, overall what
14 do you derive out of this document that informs your
15 opinions that you've been offering to the Court and
16 that you do offer to the Court regarding this
17 document?

18 MR. DRAPER: Objection, Your Honor.
19 She's asking this historian witness what his
20 conclusions are based in part on this double mass
21 diagram. He's not qualified to draw conclusions based
22 on a double mass diagram, and I object to his being
23 led into that.

24 JUDGE MELLOY: I'm going to sustain
25 that. And, also, I limited the purpose of this to

1 show notice only. I'm not -- I don't think this is
2 the appropriate witness to get into the contents of --
3 of the exhibit and to interpret the exhibit, so I'm
4 going to sustain that objection.

5 **MS. BARFIELD:** And for clarification,
6 Your Honor, I was not -- definitely was not asking
7 Dr. Miltenberger to provide a technical opinion with
8 respect to the graph, and I appreciate that you've
9 sustained the objection. I was trying to get to the
10 notice issue, so I'll ask more directly.

11 **Q. (BY MS. BARFIELD)** Does your testimony that
12 you've offered to the Court, Dr. Miltenberger,
13 regarding these callouts and this document support an
14 opinion by you as an expert historian that this
15 provided notice to the State of New Mexico at the very
16 least of the interconnection between groundwater and
17 surface water and the effect of groundwater pumping on
18 flows to Texas?

19 **MR. DRAPER:** Objection, again, Your
20 Honor. She did not -- she did not contain herself to
21 the purpose that it was admitted for. It was admitted
22 for purposes of whether notice was -- there was notice
23 that these issues were being discussed. She asked
24 whether this showed that there was a connection
25 between surface water and groundwater. That's a

1 technical -- obviously a technical question, and a
2 different kind of expert is needed to answer that
3 question.

4 **MS. BARFIELD:** May I respond?

5 **JUDGE MELLOY:** I'm going to sustain
6 again. Let's move on, Ms. Barfield. I think the
7 exhibit speaks for itself.

8 **MS. BARFIELD:** All right. Thank you,
9 Your Honor.

10 One last housekeeping item, Your Honor.
11 I would move to admit Demonstrative No. 73 into
12 evidence for demonstrative purposes only, of course.

13 **MR. DRAPER:** No objection, Your Honor.

14 **JUDGE MELLOY:** 73 is admitted.

15 **Q. (BY MS. BARFIELD)** Dr. Miltenberger, I want to
16 switch gears for this last segment of our discussion
17 this morning, and I want to turn to some criticism
18 that was leveled at you by New Mexico's historian.
19 **Are you familiar with Jennifer Stevens?**

20 **A.** I am. Dr. Stevens and I both attended the
21 graduate program at UC Davis, and we've traveled in
22 the same professional circles.

23 **MS. BARFIELD:** All right. Could we pull
24 up, please, Demonstrative 74?

25 **Q. (BY MS. BARFIELD)** All right. On

1 Demonstrative 74, Dr. Miltenberger, we've listed the
2 reports and declarations of Jennifer Stevens that have
3 been provided in this case. Are you aware of these?

4 A. Yes.

5 Q. Have you reviewed them all?

6 A. Yes.

7 MS. BARFIELD: You can pull that down.
8 Your Honor, I would move to admit
9 Demonstrative 74 into evidence, please, for
10 demonstrative purposes only.

11 JUDGE MELLOY: Any objection?

12 MR. DRAPER: No objection, Your Honor.

13 JUDGE MELLOY: Exhibit 74 is admitted.

14 Q. (BY MS. BARFIELD) Now, you've addressed many
15 of Jennifer Stevens' criticisms that were leveled at
16 you already in your reports, in your declaration, as
17 well as in the testimony that you provided to the
18 Court yesterday so rather than going over every single
19 criticism that Dr. Stevens has leveled, I'd like to
20 focus on just a few issues this morning. Yesterday,
21 we talked about the JIR, and regarding the JIR's
22 assessment of groundwater, are you familiar with
23 Dr. Stevens' assertion that Texas tried to limit
24 groundwater studies in the area below Elephant Butte
25 Reservoir in New Mexico?

1 A. Yes.

2 Q. Okay. Now, on the basis of your extensive
3 review and analysis of historical documents in this
4 matter, including the JIR, as well as historical
5 documents that inform the JIR, is this assertion of
6 Dr. Stevens supported by the historical evidence?

7 A. No. I don't believe it is.

8 Q. Okay. Now, can you please share with the
9 Court today why in your opinion that Dr. Stevens'
10 conclusions on this issue are not supported by the
11 historical evidence?

12 A. Well, the interpretation appears predicated
13 largely upon a single document, a -- a letter from
14 Raymond Hill to Frank Clayton at the outset of the
15 joint investigation. It's a letter that Hill dictated
16 in which he provided input to Clayton regarding the
17 federal proposal for the joint investigation and the
18 allocation of -- of effort and moneys. Hill's
19 position on this was that what the federal amount was,
20 which I believe is around \$200,000, he believed would
21 be sufficient to obtain all the information necessary
22 for the formulation of a Compact and so Hill was
23 interested in finding that investigation, having focus
24 on those issues. So, for instance, Hill opposed what
25 he called studies of social economics that he felt

1 that the federal investigators might -- might do. He
2 -- in relation to groundwater, he made the observation
3 that it was -- it mattered little in relation to the
4 total supply. Hill's position on it was that the
5 effort should be devoted to, say, an examination of
6 return flows, which he thought were very critical to
7 amassing the data necessary to formulate a Compact.

8 **Q. And is there anything else you wanted to**
9 **comment on relative to your historical analysis of**
10 **that particular document, the January 27th, 1936,**
11 **letter relied upon by Dr. Stevens?**

12 A. Well, I find the -- the interpretive posture
13 on it somewhat puzzling. It seems to assume that --
14 it seems to assume a couple of things, one, that Texas
15 had some veto over aspects of the investigation, that
16 Texas was somehow responsible for an investigation of
17 groundwater in New Mexico. Any -- any investigation
18 -- any extensive investigation of groundwater below
19 Elephant Butte would naturally have involved both
20 states, both New Mexico and -- and Texas, and it seems
21 to me that New Mexico, if it wished, could have
22 undertaken that investigation below Elephant Butte.

23 **Q. Now, Dr. Miltenberger, have you seen anything**
24 **at all in the vast research that -- that you've**
25 **performed in this matter and described to the Court**

1 that suggests that Texas has any veto power whatsoever
2 over the scope of the planned JIR study?

3 A. No.

4 Q. Okay.

5 JUDGE MELLOY: Excuse me, Ms. Barfield.
6 Let me just ask you a quick question.

7 MS. BARFIELD: Yes.

8 JUDGE MELLOY: I think I've seen that
9 letter, but do you happen to know the exhibit number,
10 is it an exhibit, and has it been admitted?

11 MS. BARFIELD: The exhibit number is
12 Texas 0486, Your Honor, and let me just check real
13 quick on my record of whether it's admitted or on my
14 list.

15 JUDGE MELLOY: It'll probably come up in
16 Dr. Stevens' testimony, I assume.

17 MS. BARFIELD: I suspect it will. Oh,
18 it is admitted, Your Honor.

19 JUDGE MELLOY: You may proceed.

20 MS. BARFIELD: Thank you, Your Honor.

21 Q. (BY MS. BARFIELD) In the same vein,
22 Dr. Miltenberger, was the study of groundwater pumping
23 in New Mexico from your observations of the historical
24 documents and as a historian, was this in Texas'
25 control or New Mexico's control?

1 A. In New Mexico's control.

2 Q. Okay. In your research, did you find any
3 evidence whatsoever that New Mexico investigated or
4 even urged the investigation of groundwater pumping
5 within New Mexico and below Elephant Butte Reservoir?

6 A. No, I haven't.

7 Q. Okay. Did it do so for the middle Rio Grande
8 from your observations?

9 A. There was a study performed of groundwater
10 conditions in the middle Rio Grande.

11 Q. Was that contained within the JIR?

12 A. Yes.

13 Q. Based upon your review and understanding of
14 Dr. Stevens' materials, did she opine on whether New
15 Mexico was equally concerned with the lower Rio Grande
16 as it was with the middle Rio Grande?

17 A. Yes.

18 Q. To make sure I understand, her opinion was
19 that she was -- okay -- equally concerned middle Rio
20 Grande, lower Rio Grande, they were on equal footing;
21 did I understand that correctly?

22 A. That's what I understand Dr. Stevens'
23 argument to be.

24 Q. Perfect. And did you agree with this -- do
25 you currently agree with this opinion?

1 A. No.

2 Q. Okay. And why not?

3 A. Well, in my professional opinion, the
4 historical record indicates that New Mexico's interest
5 was more in protecting and fostering the Middle Rio
6 Grande Conservancy District than in southern New
7 Mexico below Elephant Butte, during the course of the
8 joint investigation and throughout the Compact
9 negotiations of the 1930s.

10 Q. All right. Now, Dr. Miltenberger, we also
11 talked yesterday about the 1938 or baseline condition,
12 and you told us about the document authored by Raymond
13 Hill in 1968, who was one of the original negotiators
14 of the Compact. Now, are you aware that Dr. Stevens
15 has questioned your use of that 1968 report by -- by
16 Raymond Hill and its utility to the overall
17 understanding of the Compact itself?

18 A. Yes.

19 Q. Okay. And do you agree with that?

20 A. Yeah. I actually find it kind of curious. I
21 find it curious for a couple of reasons.

22 Q. Why is that? Could you -- could you explain
23 it to the Court, please?

24 A. Yes. I find it curious, first of all,
25 because I find that Hill's statements within -- in

1 that report are very consistent with the historical
2 record and statements made closer in time to the
3 Compact itself.

4 Q. Now, based upon your review and understanding
5 of Dr. Stevens' materials, did she find that document
6 unreliable?

7 A. Yes. She finds it unreliable.

8 Q. Okay. And do you agree with Dr. Stevens'
9 assessment that that 1968 Raymond Hill document is
10 unreliable?

11 A. No. I -- I -- I find it, again, consistent,
12 and I -- I also find it curious because I think New
13 Mexico sees value and utility in the report itself.

14 Q. Okay. So that's interesting. So what do you
15 base that opinion on, that New Mexico itself, from
16 your perspective, sees value in the 1968 Raymond Hill
17 document?

18 A. I see New Mexico seeing it has value now and
19 in the past. Hill's statements, as we talked about
20 yesterday, Hill's statements/observations about the
21 character and construction of the Compact were
22 mirrored in statements made by the State Engineer S.E.
23 Reynolds in 1968. Hill's report, while authored at
24 the request of the State of Texas, was submitted
25 during his deposition on behalf of Texas and New

1 Mexico in their -- in their dispute with Colorado in
2 19 -- in the 1960s, and New Mexico itself, in these
3 proceedings, has proffered -- proffered the report to
4 support its motions for summary judgment.

5 Q. All right. And to make sure that I
6 understand your overall comment here, the same
7 document from 1968 that Dr. Stevens has stated from
8 your perspective is unreliable and that you should not
9 rely upon to support your opinions regarding the 1938
10 or baseline condition, that same document is utilized
11 by New Mexico in this proceeding to support summary
12 judgment motions, and it was also utilized in 1968 in
13 the original action by New Mexico against Colorado --
14 by New Mexico and Texas against Colorado; do I have
15 that correctly?

16 A. Yes.

17 Q. All right. Let's --

18 JUDGE MELLOY: Excuse me a second.
19 Could I just get clarification on one point? When we
20 talk about the Hill document, are we talking about the
21 deposition and the report or just the report? We keep
22 referring to the Hill document. What exactly is the
23 Hill document?

24 MS. BARFIELD: I think my question was
25 centered around the report itself, Your Honor, the

1 1968 Hill report, but I would ask Dr. Miltenberger to
2 clarify that.

3 Q. (BY MS. BARFIELD) Does your opinion extend to
4 the deposition testimony from 1968 as well as the
5 Raymond Hill report from 1968?

6 A. Yes.

7 Q. Okay.

8 A. Yes.

9 Q. All right. Thank you for that clarification.
10 Okay. So let's talk about the meaning in the
11 schedules in the Compact for the normal release and
12 how it relates to your opinions on the 1938 or
13 baseline condition. Are there differences from your
14 perspective between your opinions on this issue and
15 Dr. Stevens' opinions on this issue?

16 A. Yes.

17 Q. Could you explain those differences to the
18 Court, please?

19 A. Yes. So I think this is probably one of the
20 most important differences between myself and
21 Dr. Stevens. Dr. Stevens doesn't see a connection
22 between the schedules and the normal release figure,
23 and I -- I don't think the historical record supports
24 that. My -- my reading of my expert opinion, those
25 worked in tandem to inform and capture this condition

1 circa 1938, and I think more broadly, this speaks to a
2 sharper dichotomy between myself and Dr. Stevens
3 between -- I might characterize it this way, between
4 use versus rights where it comes to what the Compact
5 was intended to do.

6 **Q. If you could, could you explain in more**
7 **detail the differences in the opinions on uses versus**
8 **right between you and Dr. Stevens?**

9 A. Dr. Stevens argued that the emphasis I place
10 on uses amounts to an interpretation that the Compact
11 negotiators didn't consider rights at all. The
12 concept of rights for the citizens of each of the
13 three states came up in the course of the Compact
14 negotiations, particularly early on. New Mexico also,
15 during that September/October set of meetings in which
16 the JIR was first presented, New Mexico indicated that
17 it wanted to negotiate on the basis of protecting the
18 rights of its citizens. But ultimately, the Compact
19 wasn't structured that way, and I think the -- the
20 statement that we've talked about before, the almost
21 mission statement of the Committee of Engineers, their
22 direction was to provide for securing or safeguarding
23 present uses of water. Now, to the extent that that
24 might have protected or supported existing rights,
25 then I think there's -- there's interface. There's

1 interface there. At the end of the day, my argument
2 is -- my interpretation, excuse me, is just more
3 nuanced. In protecting uses for Texas, that meant
4 protecting the Rio Grande Project. For New Mexico,
5 that entailed protection for the middle Rio Grande,
6 both from Colorado and Texas below. In providing
7 through the schedules a means by which there could be
8 some limited form of upstream depletions, it enabled
9 new uses. A new use in this sense being the middle
10 Rio Grande, at least relative to the Rio Grande
11 Project, and certainly any new projects up in
12 Colorado, as well. So that ultimately, I think,
13 captures what the Compact was about. It wasn't
14 adjudication of rights. It was a practical solution
15 to a fundamental problem, how to apportion equitably
16 an insufficient water supply.

17 **Q. Are there historical documents,**
18 **Dr. Miltenberger, that support your conclusion that**
19 **the Compact is not about protecting rights, but it's**
20 **about protecting uses?**

21 A. Yes. I see that finding expression in the
22 Committee of Engineers reports, the statements and
23 analyses made by the engineers themselves, both at the
24 time and later on, such as the -- the Hill 1968
25 report. I think I even -- well, I do, I see that in

1 Reynolds own '68 address where he, again, sort of
2 acknowledges what the Compact was intended to
3 accomplish. I think it's captured really in all my
4 reports and declarations and in my testimony today.

5 Q. All right. Now, from your review of
6 Dr. Stevens' materials, did you gain any understanding
7 of the scope of the research that she performed
8 regarding Compact schedules that you've been
9 discussing this morning?

10 A. Yes.

11 Q. And what is that understanding?

12 A. My understanding is that Dr. Stevens didn't
13 research or analyze the schedules. I believe in
14 whatever declaration, she said that the schedules
15 speak for themselves. I don't believe that's true.
16 As an historian, I believe every -- every document,
17 every action, every event has a context, and I believe
18 the schedules have -- have a context.

19 Q. Now, when we first started our discussions or
20 towards the beginning of our discussions yesterday, we
21 talked about whether or not there was a standard of
22 care for appropriate research techniques for a
23 historian. Do you recall that?

24 A. Yes.

25 Q. Okay. And I'm paraphrasing, but -- but I

1 think you spoke that there's not a standard, per se,
2 but -- but the appropriate research had to be directed
3 towards the -- the question that was being asked; is
4 that right?

5 A. That's right.

6 Q. Okay. And is Dr. Stevens' failure to
7 research or study the origins of the -- the schedules
8 themselves appropriate as an expert historian for the
9 evaluation of Compact interpretation?

10 A. Well, throughout the Compact negotiations in
11 -- in the immediate Compact negotiations leading to
12 the Compact, discussion of the schedules and the
13 release figure were central points of discussion, and
14 so I -- I -- I don't believe, in my expert opinion,
15 without researching or analyzing how those came to be,
16 it doesn't lead to a full appreciation for why the
17 Compact was structured the way that it was.

18 Q. Okay. Does it go to the very heart of your
19 research in this matter?

20 A. Yes.

21 Q. Okay.

22 MR. DRAPER: Your Honor, if I may
23 interrupt for a moment. For point of clarification, I
24 don't think that the question has identified what is
25 meant by the schedules for purpose of this. If that

1 could be clarified, I think the question would not be
2 vague as it -- as it was asked.

3 **JUDGE MELLOY:** Go ahead and clarify what
4 you're referring to, Ms. Barfield.

5 **Q.** (BY MS. BARFIELD) Dr. Miltenberger, could you
6 clarify, please, what you were referring to with
7 regard to the schedules?

8 **A.** The schedules of delivery, the two schedules
9 of delivery in the Compact.

10 **Q.** Okay. Thank you, Dr. Miltenberger. Now, are
11 you also familiar with the -- from your review of the
12 materials of Jennifer Stevens, are you also familiar
13 with the scope of research that she did relative to
14 archives and libraries similar to your discussion
15 early yesterday of visiting 26 different locations?

16 **A.** Yes.

17 **Q.** Now, are you aware of whether or not
18 Dr. Stevens visited the state of Colorado, any
19 libraries or archives in the state of Colorado, for
20 the purpose of gathering or collecting documents to
21 support her research?

22 **A.** I don't recall Dr. Stevens identifying any
23 Colorado collections or archives.

24 **Q.** Okay. Are you critical of that?

25 **A.** Yes. I think, in my expert opinion, the

1 Compact was about -- involved all three states and
2 getting an appreciation of Colorado's perspective on
3 the Compact, I think, is essential, once again, to
4 understanding fully its origins, how it came to be,
5 and why it was put together the way that it was.

6 Q. We're about to wrap up. One final question
7 for you. There were several objections yesterday
8 during your testimony on the basis that you're not a
9 technical expert, you're not a hydrologist or
10 engineer, you're merely a historian. So what I wanted
11 to ask you is have you made any recommendations that
12 the historical materials that you've reviewed and have
13 opinions on should also be reviewed by a technical
14 consultant, at least those materials that have a
15 technical basis, have you made such a recommendation
16 to the Texas lawyers in this matter?

17 A. Yes, I have.

18 Q. Okay. Do you have any understanding of
19 whether or not these historical technical documents
20 have, in fact, been reviewed from any of the technical
21 consultants on behalf of the State of Texas?

22 A. I do, yes.

23 Q. And what's your understanding in that regard?

24 MR. DRAPER: I would object. This is
25 hearsay as to what the technical viability of these

1 historical documents might be. If that's going to be
2 addressed, it needs to be addressed by the proper type
3 of expert and not related through -- through the
4 testimony of a historian.

5 **JUDGE MELLOY:** Well, I don't understand
6 this question to be asking a technical question, but
7 rather just whether or not the documents were reviewed
8 by the technical experts, so I'll let that -- the
9 witness can answer that question.

10 **MS. BARFIELD:** Thank you, Your Honor.

11 **Q. (BY MS. BARFIELD)** Dr. Miltenberger, do you
12 have an understanding of whether or not the historical
13 technical documents in this case, some of which you've
14 discussed during the course of your live testimony,
15 have also been reviewed by technical consultants on
16 behalf of the State of Texas?

17 **A.** Yes, I do.

18 **Q.** And who is that, if you know?

19 **A.** Dr. Robert Brandes.

20 **MS. BARFIELD:** All right. Your Honor,
21 that's all I have with respect to the substantive
22 questioning for right now, subject, of course, to
23 potential redirect. We do have some fairly
24 significant document issues to go through, however.

25 **JUDGE MELLOY:** All right. Go ahead.

1 **MS. BARFIELD:** All right. As a
2 reminder, yesterday we have a series of objections to
3 historical documents. We did go through a lot of them
4 in yesterday's testimony. We still have a series of
5 documents left that although we haven't had robust
6 discussions about these documents, they are
7 nonetheless source documents for Dr. Miltenberger's
8 reports, as well as his declarations, as well as his
9 testimony that he's offered in court, so we're going
10 to go through the ones that have not yet been admitted
11 and work through getting them admitted.

12 Dr. Miltenberger, I would encourage you to, please,
13 use the binders to the extent that you need them for
14 purposes of these questions, and hopefully we'll just
15 have a couple of questions with respect to each
16 document.

17 **THE WITNESS:** Will do. Thank you.

18 **MS. BARFIELD:** Okay. So let's start
19 with New Mexico 1452 --

20 **MR. DRAPER:** If I may inquire, are we
21 going into a -- an effort to admit documents that are
22 -- or exhibits that were objected to, which he has not
23 referred to and which you have not asked to be
24 admitted so far?

25 **MS. BARFIELD:** That's correct in part

1 and not correct in part. We are going through the
2 remaining documents that are on the list for direct
3 examination for Dr. Miltenberger, and as I, I think
4 explained yesterday to the Court, as well as this
5 morning, that there are a series of documents that are
6 on the list that have not yet been admitted that
7 support as source documents the testimony offered by
8 Dr. Miltenberger, as well as support his reports and
9 his opinions in those reports, as well as the
10 declarations as source documents. So those are the
11 ones we are going to admit now -- or seek to admit.

12 **JUDGE MELLOY:** Go ahead.

13 **Q. (BY MS. BARFIELD)** Dr. Miltenberger, did you
14 have an opportunity to pull up New Mexico 1452? In
15 your binders, it should be very close to the very
16 first -- the New Mexico documents are sequenced prior
17 to the Texas documents in the binders.

18 **MS. BARFIELD:** Peder, if you could pull
19 up New Mexico 1452, that'd be faster.

20 **A.** Thank you.

21 **Q. (BY MS. BARFIELD)** Okay. You now see on your
22 screen New Mexico 1452. Dr. Miltenberger, what is
23 this document?

24 **A.** Yes, I do.

25 **Q.** Okay. What is it?

1 A. This document is a paper prepared by the U.S.
2 Geological Survey, which provides a kind of biography
3 and review of the life and work of C.V. Theis.

4 **Q. Did you -- have you reviewed this document?**

5 A. Yes, I have.

6 **Q. Do you rely on this document in support of**
7 **the opinions you've offered in your reports,**
8 **declarations, and trial testimony?**

9 A. Yes, I have.

10 **MS. BARFIELD:** Your Honor, I'd move to
11 admit New Mexico 1452.

12 **JUDGE MELLOY:** Any objection?

13 **MR. DRAPER:** No objection, Your Honor.

14 **JUDGE MELLOY:** 1452 is admitted.

15 **MS. BARFIELD:** Thank you.

16 **Q. (BY MS. BARFIELD) Moving on to New Mexico**
17 **1541.**

18 **MS. BARFIELD:** And, Peder, if you could
19 try to keep pulling these up, that could be faster
20 than the binders.

21 **Q. (BY MS. BARFIELD) On the screen,**
22 **Dr. Miltenberger, is New Mexico 1541. We probably**
23 **need to advance to get away from the box**
24 **identification. Maybe one more. There we go.**
25 **Dr. Miltenberger, what is this document?**

1 A. This is a letter from C.V. Theis or Charles
2 V. Theis, to then State Engineer of New Mexico John
3 Bliss in October of 1947.

4 **Q. Is this a document you've reviewed?**

5 A. Yes.

6 **Q. Is this a document you have relied upon in**
7 **support of your trial testimony?**

8 A. Yes.

9 **MS. BARFIELD:** Your Honor, I move to
10 admit New Mexico 1541.

11 **MR. DRAPER:** No objection, Your Honor.

12 **JUDGE MELLOY:** Well, one second on this
13 one. As I understand it, this was not objected to by
14 New Mexico but by the United States. Ms. Coleman, do
15 you still object?

16 **MS. COLEMAN:** No, we do not.

17 **JUDGE MELLOY:** All right. 1541 is
18 admitted.

19 **MS. BARFIELD:** Thank you, Your Honor.

20 **Q. (BY MS. BARFIELD) Moving to Texas 518. I**
21 **could have an error in my notes, Dr. Miltenberger. I**
22 **feel like this is a document we did review yesterday**
23 **during the course of your testimony, but at any rate,**
24 **just to make sure, what is this document?**

25 A. This is Charles Slichter's observations of

1 the ground waters of Rio Grande Valley, USGS Water
2 Supply paper from 1905.

3 Q. Okay. And you reviewed this document?

4 A. Yes.

5 Q. And you rely upon this document in support of
6 the opinions in your reports, declarations, and trial
7 testimony?

8 A. Yes.

9 MS. BARFIELD: Your Honor, I move to
10 admit, to the extent it hasn't already been admitted,
11 Texas 518.

12 MR. DRAPER: No objection, Your Honor.

13 JUDGE MELLOY: 518 is admitted.

14 Q. (BY MS. BARFIELD) If we can look at Texas 521
15 -- oh, no. We're going to skip that one. Let's move
16 onto Texas 615, please. Dr. Miltenberger, what is
17 this document, if you know?

18 A. This is a copy of the last set of proceedings
19 that lead into the Rio Grande Compact of 1938.

20 Q. And you've reviewed the document?

21 A. Yes.

22 Q. When you reviewed it, was it sufficiently
23 legible for you to review and understand the document?

24 A. Yes.

25 Q. Okay. And you relied upon this document to

1 support your opinions you've offered in trial, as well
2 as reports or declarations?

3 A. Yes.

4 MS. BARFIELD: Your Honor, I move to
5 admit Texas 615.

6 JUDGE MELLOY: Any objection?

7 MR. DRAPER: It's hard to read, Your
8 Honor, but we have no objection.

9 JUDGE MELLOY: 615 is admitted.

10 Q. (BY MS. BARFIELD) Could we please look at
11 Texas 617? Dr. Miltenberger, what is this document?

12 A. This is a letter from Frank Clayton to S.O.
13 Harper from January, 1938. It appears in the
14 proceedings that we just were looking at.

15 Q. Oh, I see. It's extracted from Texas 615 and
16 labeled as an individual document. Do I have that
17 correct?

18 A. That's correct, yes.

19 Q. Okay.

20 MS. BARFIELD: Your Honor, on the basis
21 that it is part of the materials already admitted as
22 Texas 615, can Texas also -- Texas also moves to admit
23 Texas 617.

24 MR. DRAPER: No objection.

25 JUDGE MELLOY: 617 is admitted.

1 Q. (BY MS. BARFIELD) Let's look at Texas 627,
2 please. Have to advance one to get to the document
3 itself. Okay. So 627, Dr. Miltenberger, have you --
4 what is this document?

5 A. This is a copy of the set of testimony from
6 the Rio Grande -- the original action back in 1935.

7 Q. And have you reviewed this material?

8 A. Yes, I have.

9 Q. Okay. Have you relied upon this in support
10 of your opinions and your reports, declarations, or
11 trial testimony?

12 A. I have.

13 **MS. BARFIELD:** Your Honor, I would move
14 to admit Texas 627, please.

15 **JUDGE MELLOY:** Any objection?

16 **MR. HARTMAN:** Your Honor, Preston
17 Hartman for Colorado. I speak up because this is one
18 of the potential exhibits that Colorado objected to,
19 and I suspect my objection will apply to a lot of
20 other exhibits. If we're going to admit exhibits in
21 connection with Dr. Miltenberger's testimony, we
22 should understand why he thinks they're important, how
23 they connect to his opinions, rather than have counsel
24 do that later. That should be done now, otherwise, we
25 don't know the significance of this. And as I said, I

1 suspect that stands for a lot of the other exhibits
2 we're going to go through.

3 **JUDGE MELLOY:** Do you want to lay some
4 further foundation, Ms. Barfield?

5 **Q. (BY MS. BARFIELD)** Dr. Miltenberger, you've
6 just testified that you did, in fact, rely upon these
7 materials to support your opinions in this matter.
8 Could you clarify?

9 **A.** Yes. This particular set of trial testimony
10 from the original action concerns Raymond Hill's
11 testimony regarding equivalent service and the maximum
12 safe yield from the Elephant Butte Reservoir.

13 **MS. BARFIELD:** Your Honor, I move to
14 admit Texas 627, please.

15 **JUDGE MELLOY:** Any further objection?

16 **MR. DRAPER:** Your Honor, this is only
17 part of a larger set of documents, and we would -- at
18 this point, we would simply reserve the right to
19 submit other parts of these documents at a later time.

20 **JUDGE MELLOY:** All right. Is Colorado
21 still objecting?

22 **MR. HARTMAN:** That was skim foundation,
23 Your Honor, but if we're -- if we're going to go
24 through all of these exhibits and -- and just hear
25 that Dr. Miltenberger relied on them, that's -- that's

1 just not enough. We haven't heard how -- how this
2 document informs his opinions, and there could be some
3 explanation of that in his report, but he's testifying
4 now, not the report.

5 **JUDGE MELLOY:** All right. This is 627,
6 right?

7 **MS. BARFIELD:** That's correct, Your
8 Honor.

9 **JUDGE MELLOY:** All right. I'm going to
10 admit 627.

11 **MS. BARFIELD:** Thank you, Your Honor.

12 **Q. (BY MS. BARFIELD) Moving on to Texas 632.**
13 **And let's advance it past the box page.**

14 **Dr. Miltenberger, what is this document?**

15 A. This is a copy of a reply by New Mexico to a
16 suit filed by the State of Texas against New Mexico
17 and the Middle Rio Grande Conservancy District in
18 1951.

19 **Q. Have you reviewed this document?**

20 A. Yes, I have.

21 **Q. Did you rely on this document in support of**
22 **your opinions?**

23 A. Yes.

24 **Q. When you reviewed the document, was it**
25 **sufficiently legible for you to read and understand**

1 the document?

2 A. Yes.

3 Q. Okay. And could you specifically describe
4 for us how this relates to your opinions and how you
5 rely upon this document in support of your opinions?

6 A. Yes. In -- in this particular filing, there
7 are arguments made by New Mexico regarding the -- the
8 nature of the Rio Grande Compact, in particular, John
9 Bliss, former engineering advisor to the New Mexico
10 State Engineer and Rio Grande Compact Commissioner,
11 now himself the Rio Grande Compact Commissioner and
12 State Engineer for New Mexico offers his opinion
13 regarding the nature of the apportionment below
14 Elephant Butte and his understanding of the Rio Grande
15 Compact.

16 MS. BARFIELD: Your Honor, I'd move to
17 admit Texas 632 into evidence.

18 JUDGE MELLOY: Any objection?

19 MR. HARTMAN: Your Honor, same objection
20 as before. I'll just let that stand for all of the
21 exhibits that Colorado has objected to on the list and
22 offer no further argument on it.

23 JUDGE MELLOY: 632 is admitted.

24 Q. (BY MS. BARFIELD) Okay. Let's move onto
25 Texas 643, please. And if we could advance one or two

1 in, there we go. Dr. Miltenberger, what is this
2 document?

3 A. This -- this document is a copy of the
4 agreement between the predecessors to EBID and EP1
5 with the United States, an agreement that was signed
6 or entered into in June of 1906, the first sort of
7 contractual arrangement between the federal government
8 in relation to the Elephant Butte or Rio Grande
9 Project.

10 Q. And you've reviewed this document, I take it?

11 A. Yes, I have.

12 Q. Okay. And when you reviewed the document,
13 was it sufficiently legible for you to understand --
14 read and understand the document?

15 A. Yes.

16 MS. BARFIELD: Your Honor, I move to
17 admit Texas 643, please.

18 JUDGE MELLOY: Now, this exhibit, I
19 believe, was part of the summary judgment of record,
20 wasn't it? At least I think I've seen this before.

21 MS. BARFIELD: I don't have a note to
22 that. Dr. Miltenberger, can you respond to the
23 Court's question, if you know?

24 THE WITNESS: Yes, I believe -- I
25 believe His Honor is correct.

1 **MS. BARFIELD:** All right.

2 **JUDGE MELLOY:** All right. Any objection
3 to 643?

4 **MR. DRAPER:** No objection.

5 **JUDGE MELLOY:** All right. 643 is
6 admitted.

7 **MS. BARFIELD:** Thank you, Your Honor.
8 If we could advance to Texas 645,
9 please.

10 **Q. (BY MS. BARFIELD) Dr. Miltenberger, what is**
11 **this document?**

12 **A.** This is a letter from Frank Clayton in August
13 of 1938 to Homer Leonard, a representative -- a state
14 representative.

15 **Q. Okay.**

16 **A.** Regarding the Compact.

17 **Q. I'm sorry. I didn't mean to cut you off.**
18 **You've reviewed this document?**

19 **A.** Yes.

20 **Q. And when you reviewed the document, was it**
21 **sufficiently legible for you to read and understand**
22 **the document?**

23 **A.** Yes.

24 **MS. BARFIELD:** Your Honor, I would move
25 to admit Texas 645.

1 **JUDGE MELLOY:** Any objection?

2 **MR. DRAPER:** No objection, Your Honor.

3 **JUDGE MELLOY:** 645 is admitted.

4 **MS. BARFIELD:** Thank you, Your Honor.

5 **Q. (BY MS. BARFIELD) Texas 646 is the next one**
6 **I'd like to pull up. There we go. Dr. Miltenberger,**
7 **what is this document?**

8 **A.** This is another copy of the letter from H.C.
9 Neuffer to Thomas McClure in which he expresses
10 concerns about the December, 1937, Committee of
11 Engineers report.

12 **Q.** When you say "another copy,"
13 **Dr. Miltenberger, are you saying we've already**
14 **discussed this? Is this a duplicate of something we**
15 **talked about yesterday?**

16 **A.** Yes.

17 **MS. BARFIELD:** My apologies to the
18 Court. I missed this as a duplicate, the January,
19 1938, letter that this is a copy of was admitted
20 yesterday, it appears, and I don't have at my
21 fingertips the number that it was admitted under. But
22 given that, we'll skip that. Let's move on to Texas
23 647, please.

24 **Q. (BY MS. BARFIELD) Dr. Miltenberger, what is**
25 **this document?**

1 A. If we can advance one more page. Yes. So
2 this is a memo and an accompanying report that
3 discusses circa 1913 the water supply of the Rio
4 Grande Project, here identified as the Elephant Butte
5 Project. The -- the memorandum was prepared for then
6 Interior Secretary Lane, by then Chief of the U.S.
7 Reclamation Service, the chief engineer, A.P. Davis.

8 **Q. Dr. Miltenberger, you have reviewed this**
9 **document; is that right?**

10 A. Yes.

11 **Q. And when you did so, was it sufficiently**
12 **legible for you to read and understand the document?**

13 A. Yes.

14 **MS. BARFIELD:** I'd move to admit Texas
15 647 into evidence, please.

16 **JUDGE MELLOY:** All right. Texas 647 is
17 admitted.

18 **MS. BARFIELD:** Thank you, Your Honor.

19 **Q. (BY MS. BARFIELD) Moving on to Texas 650.**

20 **JUDGE MELLOY:** I'm sorry. I didn't give
21 parties a chance to object. Is there any objection to
22 647?

23 **MR. DRAPER:** Thank you, Your Honor. No
24 objection.

25 **Q. (BY MS. BARFIELD) All right. So let's**

1 advance to Texas 650. Dr. Miltenberger, what is this
2 document?

3 A. This is a letter from Frank Clayton to S.O.
4 Harper, the chair of the Rio Grande Compact
5 Commission, the U.S. representative, in January, 1938,
6 in which Clayton expresses his opposition to McClure's
7 opposition to the December, 1937, Committee of
8 Engineers report.

9 Q. All right. And you've reviewed this?

10 A. Yes.

11 Q. Okay. And when you reviewed it, was it
12 sufficiently legible that you could read and
13 understand the document?

14 A. Yes.

15 MS. BARFIELD: Your Honor, I would move
16 to admit Texas 650, please.

17 MR. DRAPER: Your Honor, this is -- this
18 exhibit is -- is barely legible to begin with, and the
19 witness has not -- in line with what Mr. Hartman was
20 saying, has not laid a sufficient foundation, so we
21 would object.

22 JUDGE MELLOY: Well, he did talk about
23 this subject about -- I don't know -- I don't exactly
24 understand your and Mr. Hartman's objection, because
25 he specifically talked about this subject matter and

1 talked about the debate between the engineer's report,
2 New Mexico's opposition, the counter arguments. To
3 me, it's fairly obvious, but maybe I'm missing
4 something here. I'm going to --

5 **MR. DRAPER:** I think you've convinced
6 me, Your Honor. I'll withdraw my objection.

7 **JUDGE MELLOY:** Go ahead.

8 **MS. BARFIELD:** I think your mic shut
9 off. Was this one admitted, Your Honor?

10 **JUDGE MELLOY:** Yes.

11 **MS. BARFIELD:** Thank you.

12 **Q. (BY MS. BARFIELD)** All right. Let's move on
13 to Texas 651, please. There we go. Dr. Miltenberger,
14 what is this document?

15 A. This is a -- this is a letter, excuse me,
16 from M.C. Hinderlider, the Colorado commissioner, to
17 S.O. Harper, in which he also expresses opposition to
18 New Mexico's new opposition to the December, 1937,
19 report of the Committee of Engineers.

20 **Q.** Okay. And you've reviewed this document?

21 A. Yes, I have.

22 **Q.** I'm sorry. I cut you off a little bit. When
23 you did so, was it sufficiently legible to allow you
24 to read and understand the document?

25 A. Yes.

1 **MS. BARFIELD:** Your Honor, I would move
2 to admit Texas 651, please.

3 **JUDGE MELLOY:** Any objection?

4 **MR. DRAPER:** No objection, Your Honor.

5 **JUDGE MELLOY:** 651 is admitted.

6 **MS. BARFIELD:** Thank you, Your Honor.

7 **Q. (BY MS. BARFIELD) Let's move to Texas 655.**
8 **Dr. Miltenberger, what is this document?**

9 A. This document is a copy of B.M. Hall's, the
10 supervising engineer, proposal for what became the Rio
11 Grande Project. The substance of this written plan
12 was what was presented at the 12th National Irrigation
13 Congress of the same month and year, November of 1904.

14 **Q. And you have reviewed this document?**

15 A. Yes.

16 **Q. When you did so, was it sufficiently legible**
17 **to allow you to read and understand the document?**

18 A. Yes.

19 **MS. BARFIELD:** All right. I would move
20 to admit Texas 655, Your Honor.

21 **JUDGE MELLOY:** Any objection?

22 **MR. DRAPER:** No objection, Your Honor.

23 **JUDGE MELLOY:** 655 is admitted.

24 **Q. (BY MS. BARFIELD) Let's look at Texas 656,**
25 **please. All right. What is this document?**

1 A. If we can advance just one more page. So
2 this document is a -- actually, maybe if I could see
3 the second page just to make certain I'm -- I'm --
4 okay. Maybe the -- maybe the third page just to be
5 certain of who the author is. Okay. Yeah, so this is
6 a letter from S.O. Harper to the, I believe if we were
7 to go back to the first page in which it begins, to
8 the commissioner of Reclamation -- excuse me -- to the
9 Secretary of Interior, pardon me, through the
10 commissioner of Reclamation, in which Harper is
11 presenting the substance of what occurred at the
12 December, 1934, meeting of the Rio Grande Compact
13 Commission.

14 **Q. Okay. And you have reviewed this document?**

15 A. Yes, I have.

16 **Q. When you did so, was it of sufficient quality**
17 **to allow you to read it and understand it?**

18 A. Yes.

19 **MS. BARFIELD:** Your Honor, I would move
20 to admit Texas 656, please.

21 **JUDGE MELLOY:** Any objection?

22 **MR. DRAPER:** No objection, Your Honor.

23 **JUDGE MELLOY:** 656 -- is there any way
24 we can expedite this process? Mr. Hartman, you're
25 objecting to every one of these; is that correct?

1 **MR. HARTMAN:** No, Your Honor. The list
2 should show -- it's a good number of them, but it's
3 not every one. It's probably about two-thirds. But I
4 understand your rulings on the first couple objections
5 to mean that if Dr. Miltenberger identifies these
6 documents and says he's relied upon them, that we're
7 going to admit them so I'm not going to argue further
8 about the individual exhibits, if that's what you'd
9 like to do.

10 **MR. DRAPER:** Your Honor, I would add
11 that I've been informed that many of these exhibits
12 are already joint exhibits and so there may be a good
13 deal of duplication that's going on here
14 unnecessarily.

15 **MS. BARFIELD:** In response to
16 Mr. Draper's comment, if, in fact, any of these are
17 joint exhibits, we can certainly address that issue at
18 a later time or we can use this copy as the admitted
19 copy. I will say that if they are joint exhibits,
20 they're not admitted joint exhibits.

21 **JUDGE MELLOY:** Well, looks like we have
22 about, I don't know, 40 of these we're going to have
23 to go through.

24 **MS. BARFIELD:** Yeah.

25 **JUDGE MELLOY:** You know, and I did let

1 New Mexico put in a lot of exhibits that weren't
2 referenced over Ms. Barfield's objection, so I guess
3 it's a little bit of good for the goose, good for the
4 gander argument here. I guess if this is going to be
5 the standard that we're going to hold each witness up
6 to, Mr. Draper and Mr. Hartman, then we're going to be
7 doing this with every single exhibit -- every single
8 witness. But let's go. I guess we'll just have to
9 keep slogging through. Go ahead, Ms. Barfield.

10 **MS. BARFIELD:** Thank you, Your Honor.

11 I think we're on Texas 658 are we there?
12 Okay. Why don't we advance it?

13 **Q. (BY MS. BARFIELD) Okay. What is this**
14 **document?**

15 A. This is a copy of the executive order issued
16 by Franklin Roosevelt in September, 1935, effectively
17 reinstating the embargo at the recommendation of the
18 National Resources Committee's board of -- Rio Grande
19 Board of Review report.

20 **Q. And you've reviewed this document, yes?**

21 A. Yes.

22 **Q. When you did so, was it sufficiently legible**
23 **to allow you to read and understand the document?**

24 A. Yes.

25 **MS. BARFIELD:** I'd move to admit Texas

1 658, Your Honor.

2 **JUDGE MELLOY:** Any objection?

3 **MR. DRAPER:** Your Honor, no objection,
4 and in light of Your Honor's comments, I would just --
5 we would be happy to remove any objections to the
6 exhibits that are on their list. They are documents
7 that have been -- we've been notified about, and we
8 don't want to unnecessarily slow up the trial with
9 going through each one, so I would remove our
10 objections to any of the upcoming exhibits.

11 **JUDGE MELLOY:** Why don't we do this, why
12 don't I hold the record open, Ms. Barfield, for you to
13 admit any exhibits you need to admit, and we'll let
14 Mr. Draper start his cross-examination and maybe --
15 maybe while that's being done or you could have some
16 other people in your office go over these exhibits and
17 see if there are any that you really do want to object
18 to, Mr. Draper and Mr. Hartman, in light of prior
19 rulings if you have continuing objections to,
20 otherwise, maybe we can get them admitted in bulk.
21 But I'll keep the record open to do that. Is that
22 agreeable, Ms. Barfield?

23 **MS. BARFIELD:** It is, Your Honor. And
24 what we will do is compile a list by number of the
25 remaining ones to admit and circulate it to Mr. Draper

1 and Mr. Hartman and see if there are any remaining
2 objections in light of Your Honor's comments.

3 **JUDGE MELLOY:** All right. Thank you.

4 **MS. BARFIELD:** Thank you, Your Honor.

5 **JUDGE MELLOY:** All right. Then before I
6 turn to Mr. Draper, let me ask, Ms. Coleman, do you
7 have any questions of this witness?

8 **MS. COLEMAN:** No, I do not, Your Honor.

9 **JUDGE MELLOY:** All right. Then I will
10 turn the witness over to Dr. Draper for
11 cross-examination.

12 **THE WITNESS:** Excuse me, Your Honor.
13 Before we do that, may we take just a brief break for
14 -- for the -- for -- brief bathroom break?

15 **JUDGE MELLOY:** Sure. That's fine.
16 We'll take five minutes at this point.

17 **THE WITNESS:** Thank you.

18 **MS. BARFIELD:** Thank you, Your Honor.

19 (Recess.)

20 **JUDGE MELLOY:** Looks like everyone is
21 back. Mr. Draper, you may proceed.

22 **MR. DRAPER:** Thank you, Your Honor.

23 **CROSS-EXAMINATION**

24 **BY MR. DRAPER:**

25 **Q. Good morning, Dr. Miltenberger.**

1 A. Good morning.

2 Q. Just as we get started, I'd like to once
3 again clarify, you're testifying as a historian and
4 not as a technical expert in this case?

5 A. That's correct.

6 Q. And you are not offering any hydrologic or
7 engineering or water operations expert opinions as
8 part of your testimony?

9 A. No.

10 Q. And you're not an attorney, correct?

11 A. Correct.

12 Q. So just to be sure, your testimony should not
13 be understood to be an endorsement of the technical
14 correctness of the documents that you've testified to,
15 correct?

16 A. That's correct.

17 Q. I'd like to begin by looking at some of your
18 demonstratives. Let's take a look at your
19 Demonstrative No. 12, if you please. This shows the
20 flier, I guess, for the Irrigation Congress in 1904,
21 at which the Rio Grande Project was proposed; is that
22 right?

23 A. Well, it's -- it's a copy. It's a rather
24 large volume of the official proceedings of that
25 Congress.

1 Q. All right. And you indicate in the
2 called-out sections here, which as I understand come
3 from Pages 215 and 216 of the proceedings, that the
4 acres shown for New Mexico are 110,000 acres, 20,000
5 acres for Texas above El Paso, and 50,000 for Texas
6 below El Paso, as the acreages that at that point were
7 estimated to be the acreage that could be irrigated
8 from the proposed Project, correct?

9 A. Well, I -- I believe that the callout says
10 50,000 acres in the El Paso Valley below El Paso.

11 Q. Yes, that's right. So that's a total of
12 180,000 acres that was estimated at that time for the
13 Project acreage, correct?

14 A. Correct.

15 Q. And that -- that is somewhat different from
16 the final acreage that was arrived at at a later time
17 during the -- during the development of the Project,
18 isn't it?

19 A. Yes.

20 Q. And, in fact, ultimately, do you recall the
21 acreage that was arrived at for the authorized acreage
22 of the Project?

23 A. Yes.

24 Q. And that was?

25 A. If memory serves, it was 155,000 acres in the

1 Project.

2 Q. Yes. And that was arrived at as -- as part
3 of the 1938 downstream contract, we call it, that was
4 the contract between the districts and -- and approved
5 by the Assistant Secretary of Interior, correct?

6 A. I would agree with that in part and disagree
7 with it in part.

8 Q. And what's your disagreement?

9 A. Well, the arrival of the acreage was
10 something that in my reading of the historical record,
11 was arrived at over time, reflecting a variety of
12 considerations within the Project. The 1938
13 downstream contract and the 1938 interdistrict
14 agreement memorialized that, but my reading of the
15 history is that it didn't necessarily create that.
16 That was something that evolved through the operations
17 of the Project.

18 Q. Fair enough. But as far as I'm aware, and
19 I'm asking -- I'll ask you: Are you aware of any
20 official determination of the acreage of the Project
21 prior to -- prior to that agreement in 1938 and the
22 approval by the Assistant Secretary of Interior?

23 A. I can't recall an official approval.

24 Q. All right. So a third of the century, more
25 or less, well, maybe exactly, passed between the 1905

1 Act authorizing the Project and the formal
2 determination of the authorized acreage for the
3 Project, wouldn't you agree?

4 A. I'd agree in part and disagree in part.

5 Q. And have we already covered your disagreement
6 or is it -- did you have something further?

7 A. Well, I think -- I think we did in the
8 context of, again, the evolution of the Project over
9 time coming to the 155,000 acres, and that, too,
10 should probably be understood and caveated by the fact
11 that that wasn't 155,000 acres absolutely. There was
12 always some land that was suspended or -- or was laid
13 fallow over the course of the Project.

14 Q. So there were changing conditions, if I
15 understand you, during the period that the Project has
16 been in existence, and this was perhaps a milestone
17 terms of the formal recognition of the 155,000
18 authorized acreage, correct?

19 A. I don't understand part of your question.

20 Q. Which part was that?

21 A. I think you said "it." What is "it"?

22 Q. Well, let me -- it may have been the Project,
23 but let me ask it again and see if we can't agree that
24 the Project was, from its authorization in 1905, and
25 at least up through 1938, was a developing project?

1 I'll stop there.

2 A. Then I'm not sure what the question is.

3 Q. That the -- well, we're looking particularly
4 at the acreage of the Project that -- that was
5 initially, as we saw in the 1904 Congress --
6 Irrigation Congress records was estimated at 180,000,
7 and that eventually became 155,000; is that right?

8 A. Yes.

9 Q. And you're not aware of any formal
10 authorization or -- or approval of that 155,000 acre
11 figure before the 1938 contract, correct?

12 A. Well, I can't say, because I'm not an
13 attorney that the 1938 contract constituted some kind
14 of an official approval by the United States or -- or
15 any -- any party relative to the acreage on the
16 Project.

17 Q. But you do agree that the 155,000 acres are
18 identified in the 1938 contract, correct?

19 A. It is identified in part, yes.

20 MS. BARFIELD: Your Honor, if I could
21 interject one thing. I'll object that the -- that the
22 question is asked and answered multiple times at this
23 point, but I would also like the Court to note that
24 this is the context or the subject of a stipulated
25 fact submitted to the Court, No. 15, which states in

1 1922, Reclamation supported that -- reported, rather,
2 that the determined irrigable area of the Project in
3 the United States was 155,000 acres.

4 Q. (BY MR. DRAPER) Now, in 1938 --

5 MS. BARFIELD: I'm sorry, Mr. Draper.
6 The judge is trying to speak, but his mic is off.

7 MR. DRAPER: Excuse me.

8 MS. BARFIELD: We still can't hear you.

9 MR. DRAPER: Your Honor, you're still on
10 mute, I believe.

11 JUDGE MELLOY: I'll let Mr. Draper ask
12 his questions. Go ahead.

13 MR. DRAPER: Thank you, Your Honor.

14 Q. (BY MR. DRAPER) Dr. Miltenberger, do you --
15 do you know whether this 155,000 acres identified in
16 the 1938 contract was actually under irrigation in
17 1938?

18 A. I don't know.

19 Q. All right. Let's look at the proceedings of
20 the 1904 Irrigation Congress. That's Joint Exhibit
21 432. And you were testifying in your -- in your
22 demonstrative -- with respect to your demonstrative
23 exhibit from this Joint Exhibit 432, which is the
24 proceedings of the -- of the Irrigation Congress, and
25 if we look at Page 221, I think -- 227, all right,

1 this is also part of the report from Engineer Benjamin
2 Hall in that document, and we have highlighted here
3 from that exhibit, the -- the statement by Engineer
4 Hall with respect to the subject shown at the
5 top, "Source of Mesilla Wells."

6 JUDGE MELLOY: Just a second. Is that
7 showing up on your screen, Dr. Miltenberger?

8 THE WITNESS: It is, Your Honor, yes.

9 JUDGE MELLOY: For some reason, I'm not
10 seeing it. Just a second. All right. Okay. Now, I
11 have it. Go ahead.

12 Q. (BY MR. DRAPER) All right. And I will
13 represent that this is -- this page is three pages
14 beyond the quotation that you have in your -- in your
15 demonstrative, and you can see here at the beginning
16 of this discussion under that heading, "Source of
17 Supply Mesilla Wells," where he says, "I will not take
18 up your time with any further matters except one point
19 I observed in the Mesilla Valley near Mesilla Park and
20 Las Cruces where we succeeded in measuring the amount
21 of water lost by the river and contributed to the
22 gravels. As the results of the investigation at that
23 point, I think we have established that the source of
24 the water that is used by the pumping plants is the
25 river itself; that the origin of the groundwaters, or

1 the supply of groundwaters which are used by the
2 pumping plant, is the water contributed by the river
3 itself or lost by the river." Do you see that
4 statement?

5 A. I do.

6 Q. Wouldn't you agree with me that that
7 indicates that even at this early date, there was a
8 significant appreciation for the relationship of
9 groundwater and surface water, particularly the effect
10 that pumping can have on nearby surface waters
11 potentially?

12 A. Well, be careful about my expertise, I would
13 understand that that is what I understand the
14 statement to be. That's what I understand the
15 statement to be.

16 Q. Very good. Thank you. I'd like to turn now
17 to your Demonstrative Exhibit 17, if you please. I
18 think you'll recognize this as an excerpt from the
19 1906 notice from Reclamation and the frame that you
20 have highlighted indicates that, "Said water is to be
21 diverted or stored from the Rio Grande." Would you
22 agree that this is a request for the storage and
23 diversion of surface water?

24 A. Well, I want to be careful not to opine about
25 the legal import or significance of this, I would say

1 that the -- the statement does indicate water to be
2 stored and diverted from the Rio Grande River.

3 Q. And similar language is shown on your -- your
4 Demonstrative Exhibit 19, which is the 1908 notice.
5 I'll direct your attention to the highlighted area
6 that you had where -- on the right where you say -- or
7 you're quoting -- we're seeing the language, I should
8 say, "All" -- where the letter says, "All the
9 unappropriated water of the Rio Grande and its
10 tributaries, said water to be diverted or stored from
11 the Rio Grande River at a point described as follows,"
12 and then it goes ahead and describes those. Here
13 again, in terms of reading this historical document,
14 which -- and just asking you as a historian, since you
15 relied on it, does that also indicate to you that what
16 is being described here is surface water?

17 A. I don't think necessarily it does.

18 Q. And what -- do you see any reference to wells
19 in this statement?

20 A. I see no references to wells in this
21 statement, no.

22 Q. Do you believe that this could be a request
23 for appropriation of groundwater?

24 MS. COLEMAN: Objection; calls for a
25 legal conclusion.

1 Q. (BY MR. DRAPER) All right. Let me rephrase
2 that.

3 JUDGE MELLOY: Just -- okay. Go ahead
4 and rephrase.

5 MR. DRAPER: I'll be glad to. Thank
6 you.

7 Q. (BY MR. DRAPER) Do you see any references to
8 the use of wells in this notice?

9 A. I don't see any reference to wells in this
10 notice.

11 Q. Let me go to your Demonstrative No. 23, if
12 you please. This is a diagram that you showed the
13 Court. I just want to clarify that you're not --
14 you're not testifying that this is an accurate
15 depiction of the subject represented as a technical
16 matter; isn't that right?

17 A. I don't understand the question.

18 Q. I just wanted to clarify that you're not
19 endorsing this from a technical point of view as being
20 accurate?

21 A. I'm not certain I understand what you mean
22 by "technical point of view."

23 Q. Well, do you -- is the -- is -- are you
24 saying that the hydrology and the engineering aspects
25 that are depicted here is something that you are

1 **endorsing as being correct?**

2 A. Well, I see it as an indication of what B.F.
3 Fleming, the EBID manager, believed to be correct in
4 as much as if we were to highlight actually the lower
5 right-hand corner of this particular graphic.

6 **Q. Yes.**

7 A. The lower right-hand corner. In as much as
8 Fleming compiled this information from the records of
9 the Bureau of Reclamation for the year January 1st,
10 1928, to January 1st, 1929, I mean, I think he's
11 indicating that -- that this is that information.

12 **Q. So it's -- if I understand your testimony,**
13 **you see that that person was responsible for this**
14 **diagram, but you're not -- you have not independently**
15 **verified the accuracy of it?**

16 A. No, I have not independently verified the
17 accuracy of it.

18 **Q. Now, I'd like to turn our attention to your**
19 **Demonstrative Exhibit 39, please. This is indicated**
20 **to come from Texas Exhibit 677, but this is actually**
21 **the Rio Grande Joint Investigation, which has been**
22 **admitted and agreed by the parties to -- that we'll**
23 **use Colorado Exhibit 4 for this purpose. For the**
24 **record, in Colorado Exhibit 4, this is Page 74. In**
25 **the first sentence there I'd like to draw your**

1 attention to, it states, "It is to be observed, in
2 general, that extensive development of groundwater for
3 irrigation would add no new water to the Upper Rio
4 Grande Basin and that recharge of the groundwater
5 basins would necessarily involve a draft on surface
6 supplies which are now utilized otherwise." Do you
7 see that language?

8 A. I do.

9 Q. And wouldn't you agree that this indicates
10 that the drafters of the Joint Investigation Report
11 were recognizing a potential effect of groundwater
12 pumping on surface supplies at -- at the time of this
13 report?

14 A. Yes. I think they're identifying the
15 potential for that.

16 Q. And this Joint Investigation Report, I think
17 you would agree with me, was a major foundation of the
18 Compact, wouldn't you agree?

19 A. Based upon my reading of the Committee of
20 Engineers discussions and investigation, discussions
21 and reports, their internal proceedings, I'd agree
22 that certain central elements of the JIR were
23 foundational. I can't say that all aspects were.

24 Q. Thank you. And by JIR, I think you're using
25 an abbreviation for Joint Investigation Report; is

1 that right?

2 A. That's right.

3 Q. Further on that point, I'd like to draw our
4 attention to a further page in the report that's Page
5 123, I believe, of the Colorado Exhibit 4. On this
6 page, we have -- if we can see the top of the table
7 that is Table 97 in this report, and this Table 97 is
8 -- is titled, "Estimated Water Consumption by Cities,
9 Towns and Villages in the Upper Rio Grande Basin." Do
10 you see that?

11 A. I do.

12 Q. And if we look at the heading over the top
13 right columns there, it indicates, "Annual streamflow
14 depletion." Do you see that?

15 A. Yes.

16 Q. All right. And then if we go down to the
17 part of this table, it's divided into three parts, the
18 San Luis section, the middle section, and the Elephant
19 Butte to Fort Quitman section. Do you see that?

20 A. Yes.

21 Q. All right. And if we look over under the
22 annual streamflow depletion columns to the far right,
23 which sub column is entitled, "Total acre-feet," we
24 see that the actual acre-feet of depletion is being
25 indicated here due to cities, towns, and villages

1 groundwater pumping; isn't that right?

2 MS. BARFIELD: Your Honor, objection.
3 That is -- calls for expert testimony beyond the scope
4 of this particular expert's testimony.

5 MR. DRAPER: I would --

6 JUDGE MELLOY: Just one second. Where
7 does it say here that it's groundwater pumping? Oh,
8 under Footnote 2? Well, the witness can answer if
9 it's on the exhibit. The witness is not testifying as
10 an expert on water diversion, so if -- if it says that
11 on the exhibit -- and I'm trying to find out where it
12 does -- then he can answer, but if it's not on the
13 exhibit, I -- he's not allowed to give an expert
14 opinion on it.

15 MR. DRAPER: Thank you, Your Honor. And
16 I do want to keep it to what's just shown on the
17 exhibit to understand what was -- what was known at
18 the time of the joint investigation and not how those
19 numbers might have been reached, which would be the
20 subject of expert testimony.

21 Q. (BY MR. DRAPER) Dr. Miltenberger, if we look
22 at the Elephant Butte to Fort Quitman section, we can
23 see various subparts of that. For instance, we can
24 even see San Marcial to the Texas state line. That
25 would be the New Mexico part of that area, wouldn't

1 it?

2 A. Yes.

3 Q. And then if we go over to the right on that
4 line, we see the number far right, 2,400. That's
5 indicated as a specific amount of water consumption by
6 -- by -- well, cities, towns, and villages in that
7 stretch. Wouldn't you agree that's what's stated
8 there?

9 MS. BARFIELD: Your Honor, I would
10 object that the characterization of water consumption
11 mischaracterizes the document itself.

12 MR. DRAPER: Your Honor, I'm just
13 referring to the title of the document, estimated
14 water consumption.

15 JUDGE MELLOY: Overruled.

16 Q. (BY MR. DRAPER) Now, I'd like to --

17 JUDGE MELLOY: I think there was a
18 question. I'm not sure there was an answer.

19 MR. DRAPER: Yes.

20 JUDGE MELLOY: Do you want to rephrase
21 your question, Mr. Draper?

22 MR. DRAPER: Yes. Thank you, Your
23 Honor.

24 Q. (BY MR. DRAPER) Doctor, in the line I just
25 described for the San Marcial to Texas state line

1 section, do we see that the table from the Joint
2 Investigation Report here is showing an annual stream
3 depletion of 2,400 acre-feet?

4 A. That's what's shown in the column. If I
5 recall the JIR correctly, a number of these tables
6 also have some additional contextual information in
7 the text so I think to be assured of any answer
8 regarding this table, I would probably need to consult
9 the JIR itself and the discussion about the table
10 that's presented in it.

11 Q. All right. Fair enough. Let's go to your
12 Demonstrative No. 45, if you please. This is a
13 demonstrative of yours that indicated two delivery
14 schedules as recommended by the engineers. It shows
15 number one to be Colorado to New Mexico at the Lobatos
16 gage near the state line, and the second one is shown
17 as New Mexico to Texas at Elephant Butte. Do you see
18 that on the exhibit?

19 A. Yes.

20 Q. I'd like to clarify the second one, New
21 Mexico to Texas at Elephant Butte. They were not
22 recommending that it -- that the delivery at Elephant
23 Butte be just to Texas, were they?

24 A. I would need to refresh my memory by
25 reference to the Committee of Engineers report.

1 Q. But isn't -- isn't -- I just want to clarify
2 here. Isn't deliveries to Elephant Butte are then, to
3 your understanding as a historian made available for
4 delivery for irrigation purposes throughout the Rio
5 Grande Project; isn't that your understanding?

6 A. That is my understanding. That releases from
7 Elephant Butte serve Project lands, among other lands.

8 Q. And that would include lands in New Mexico,
9 wouldn't it?

10 A. Yes.

11 Q. So just wanted to clarify that this Delivery
12 No. 2, as you've depicted it on your demonstrative, is
13 -- is not just a delivery to Texas, as indicated
14 there, but also to New Mexico; is that right?

15 A. Well, the water released from Elephant Butte
16 serves lands in EBID, which is located in New Mexico.

17 Q. All right. Thank you. Let's look at your
18 Demonstrative No. 60, if you please. This is the
19 letter from Sawnie Smith to Frank Clayton. Do you
20 recognize this exhibit?

21 A. Yes.

22 Q. Do you see the middle language that you've
23 called out in this demonstrative where Mr. Smith is
24 saying, "I do not find anything in the Compact,
25 however, which ties down and limits the use or

1 division of the waters according to present usage and
2 physical conditions"? Do you see that?

3 A. Yes.

4 Q. To your understanding, was he mistaken about
5 that?

6 A. Mistaken about what?

7 Q. That there were -- that there was nothing --
8 let's see. His language was, "There was nothing in
9 the Compact which ties down and limits the use or
10 division of the waters according to present usage and
11 physical conditions"?

12 A. I understand that to be one aspect of why
13 Smith was asking Clayton for an explanation for why
14 the Compact was the way it was, because he didn't see
15 those elements in it.

16 Q. All right. And let's look at the next
17 demonstrative, that's No. 61 that you had, and in the
18 lower excerpt from Mr. Clayton, we see him pointing
19 out that lands within the Project there on about the
20 fifth line, lands within the Project have equal water
21 rights. Do you know what he means by that?

22 A. I don't have a firm understanding of what he
23 means by that. I would presume that much like many
24 Reclamation projects, that individual acres didn't --
25 weren't -- didn't have a priority over -- over others

1 of some kind, you know, that...

2 Q. He continues there in that sentence and
3 says, "And the water is allocated according to the
4 areas involved in the two states." Do you understand
5 what he means by that?

6 A. Yes.

7 Q. And what does he mean?

8 A. I think he means to say that the lands within
9 the Project, the Project that extends over the two
10 states, have these equal water rights, whatever equal
11 water rights he may be meaning or what his meaning of
12 that was.

13 Q. And is -- is another way of saying that, that
14 an equal amount of water would be available to each
15 acre on an equal basis in the Project?

16 A. I don't -- I don't see him saying equal
17 water.

18 Q. But he is referring to the fact that the
19 water is being -- is allocated through the Project
20 according to the areas involved in the two states, do
21 you see that?

22 A. Yes. The areas within the Project between
23 the two states.

24 Q. In other words, if there's twice as many
25 acres in one state versus the other, that that --

1 water would be allocated on that basis of same amount
2 of water per acre, twice as much for a state that had
3 twice as much acreage? Is that a proper way to
4 understand this language in your view?

5 MS. BARFIELD: Your Honor, I'm just
6 going to object because that's a hypothetical that's
7 outside the scope of Dr. Miltenberger's interpretation
8 of the document as an expert historian.

9 JUDGE MELLOY: Well, I think it's within
10 the scope of cross-examination.

11 You can answer, Dr. Miltenberger.

12 A. Can you please repeat the question?

13 Q. (BY MR. DRAPER) Let me -- I'm sure it'll be
14 rephrase -- rephrasing it.

15 Does this language here in -- in the letter
16 that we're looking at on the screen in Demonstrative
17 Exhibit 61 where Mr. Clayton is saying that the water
18 is allocated according to the areas involved in the
19 two states, is -- is that -- is that -- is it
20 incorrect to understand that to be saying that the
21 water is allocated on a per-acre basis?

22 A. Well, he doesn't say per-acre basis. I mean,
23 the full sentence reads these contracts provide, so
24 precisely what he means by equal water rights, and I
25 think what I reference to the contracts, he's not --

1 in that sentence, I don't see him saying what you're
2 laying out.

3 Q. He might be -- you think he might be
4 suggesting that unequal amount of water per acre would
5 be delivered to the two states?

6 A. I think we'd have to parse out more carefully
7 what equal water rights is and what he means by it,
8 and I, as I sit here, don't have a firm grasp of that.

9 Q. So you have no opinion as to whether this
10 means that an equal amount of water per acre would be
11 distributed to the two states pursuant to those
12 contracts?

13 A. Well, again, I don't -- I don't see him
14 saying precisely -- precisely that.

15 Q. So your answer is no?

16 A. No, that's not my answer.

17 Q. So you do have an opinion as to whether this
18 is stating that an equal amount of water per acre
19 would be delivered to the two states?

20 A. I don't see Mr. Clayton in this saying an
21 equal amount of water to the two states. I see him
22 saying that the contracts provide the lands within the
23 Project to have equal water rights.

24 Q. But he is saying, if I may just be sure I
25 understand your answer, that the water is allocated

1 according to the areas involved in the two states?

2 A. He does state that, yes.

3 Q. And you do not have -- you do not have an
4 opinion as to whether that means that an equivalent
5 amount of water per acre is to be delivered to the two
6 states under the contracts?

7 MS. BARFIELD: Your Honor, Mr. Draper
8 has asked and answered this question now on multiple
9 occasions, and Dr. Miltenberger has stated his opinion
10 multiple times. My objection is that counsel is now
11 argumentative at this point.

12 JUDGE MELLOY: I'll sustain that.

13 Q. (BY MR. DRAPER) Let's look a little further
14 down in this same paragraph where it says, "By virtue
15 of the contract recently executed, the total area is
16 frozen at the figure representing the acreage now
17 actually in cultivation." Do you see that language?

18 A. Yes.

19 Q. Does Mr. Clayton refer to any other aspect of
20 the Project that is frozen at this time?

21 A. I'm not certain I understand the question.

22 Q. Well, there are many other aspects of the
23 Project other than the irrigated acreage, wouldn't you
24 agree?

25 A. I'm not certain -- I'm not certain if I

1 understand what you mean by aspects of the Project.

2 Q. Well, for instance, at this time where he's
3 identifying that the contracts have frozen the acreage
4 of the Project, he -- they are not freezing the amount
5 of acreage actually irrigated as of that time, are
6 they?

7 A. The statement is the acreage now actually in
8 cultivation.

9 Q. That's true. Do you know whether the acreage
10 was actually in irrigation at that time?

11 A. Not as I sit here. As I know from the --
12 from the limited reading that I did of the Project
13 histories is that acreage is fluctuated or the amount
14 of irrigated acreage fluctuated in the Project. So as
15 of the time of this letter, October, 1938, I don't
16 know.

17 Q. I'd like to clarify one thing on your
18 Demonstrative No. 67, if you please. I'd like to draw
19 your attention to the lower right-hand part of your
20 demonstrative here, which quotes language that says --
21 and I might just mention for the record, this is from
22 a document prepared by the New Mexico State Engineer
23 to which you testified yesterday, and you have
24 highlighted here this language that starts out with
25 the word, "Heavy," if you can see there, "Heavy,

1 sustained pumping from the groundwater reservoir would
2 cut off this accretion and ultimately would reverse
3 the water table gradient so that the water now flowing
4 into the stream and constructed drains would disappear
5 into the groundwater reservoir." Now, that -- would
6 you agree that the state engineer is referring there
7 to pumping above Elephant Butte? Let me -- let me
8 give you the context. If we could go to the exhibit
9 that is identified as Texas Exhibit 701, and this is
10 indicated to be on Page 21. Let's see if we can just
11 understand the context of that statement a little
12 better. Let's see here. It may -- we may be needing
13 -- I see it's No. 19 there. If we could go two pages
14 up. Yes. So the exhibit page is actually 23. I'm
15 sorry. And we should note that for the record with
16 respect to your demonstrative, as well. This is where
17 the language, you can see there in the upper part of
18 the page, it starts that language that I read starting
19 with the word "heavy." Let's just enlarge the top
20 part of that page, if you would, above the language
21 quoted there. If we take a look at the sentence
22 immediately preceding your callout --

23 MS. BARFIELD: So that the record is
24 clear, Mr. Draper, you're referring to Page 21; is
25 that correct? You had just referred to Page 23 when

1 you did a correction to the record.

2 **MR. DRAPER:** Yes. It's actually Texas
3 Exhibit 701 at Page 23 of the exhibit.

4 **MS. BARFIELD:** This is Page -- oh, I
5 see, not Page 21 of the source document, Page 23 of
6 the exhibit itself? Thank you for that clarification,
7 Mr. Draper.

8 **MR. DRAPER:** That's correct. Thank you.
9 Your Honor, are you able to see that on
10 your screen?

11 **JUDGE MELLOY:** Yes.

12 **Q. (BY MR. DRAPER)** Okay. All right.

13 **JUDGE MELLOY:** I'm not sure -- is there
14 a pending question? I'm not sure.

15 **MR. DRAPER:** No. I've just brought this
16 up, and I would like to direct the witness' attention
17 to some of the language that's displayed here from
18 Texas Exhibit 701, and we're on -- as we were just
19 clarifying, we're on Page 23 of the exhibit itself,
20 even though the -- the document has its own page
21 numbering system.

22 **Q. (BY MR. DRAPER)** So -- and we can see here the
23 language that was contained in the demonstrative
24 starting with the word "heavy," and I just wanted to
25 look at that and clarify its context. If we look at

1 the sentence immediately before that, it says, "Annual
2 groundwater accretion to the river's mainstem in the
3 reach between the Colorado line and Elephant Butte
4 Reservoir amounts to 200 to 300,000 acre-feet." And
5 then we come to the quoted language, "Heavy, sustained
6 pumping from the groundwater reservoir would cut off
7 this accretion and ultimately would reverse the water
8 table gradient so that the water now flowing into the
9 stream and constructed drains would disappear into the
10 groundwater reservoir." And I put this up,
11 Dr. Miltenberger, to refresh your recollection as to
12 the context of that statement, and wouldn't you agree
13 that the statement that you quoted in your
14 highlighting was actually referring to the -- to the
15 reach of the Rio Grande -- Rio Grande between the
16 Colorado state line and Elephant Butte Reservoir?

17 A. That's -- that's the specific context, the
18 approximate context, yes.

19 Q. Thank you. All right. I think that's all
20 the demonstratives that I'd like to take -- take a
21 look at. Now --

22 MS. BARFIELD: Your Honor, if we're
23 going to switch gears, is it possible that it's a good
24 time for the morning break?

25 JUDGE MELLOY: Sure. Yeah. This is

1 probably a good time. Let's -- we'll break until
2 1:20. Thank you, everyone.

3 **MS. BARFIELD:** Thank you.

4 **MR. DRAPER:** Very good. Thank you, Your
5 Honor.

6 (Recess.)

7 **JUDGE MELLOY:** All right. Looks like we
8 have everyone back. I did want to mention before
9 Mr. Draper resumes his cross-examination something I
10 forgot to mention this morning. For the benefit of
11 Mr. Somach, I don't know if he's on the -- sitting in,
12 but -- and for whoever Texas is going to designate to
13 respond to the motion that Texas filed about
14 witnesses, my intent is to take that up after we do
15 the Texas expert historian. So we'll -- I think we'll
16 -- after we get done with Dr. Miltenberger, we'll go
17 into Dr. Stevens, and then I'll take up that issue of
18 the -- of the witnesses. So just for timing purposes
19 so you know that.

20 All right. Mr. Draper, you may proceed.

21 **MR. DRAPER:** Thank you, Your Honor.

22 **Q. (BY MR. DRAPER)** Welcome back,
23 Dr. Miltenberger. I'd like to look back at one of the
24 items we were discussing before the break, the Joint
25 Investigation Report, Colorado Exhibit 4, and we were

1 looking at Page 123 of the exhibit -- or of the
2 report. Actually, it's the exhibit page number, to be
3 clear, and we were looking particularly at this Table
4 97. You had some hesitancy with regard to your
5 understanding of that, not knowing the context,
6 particularly there was a question about whether --
7 whether this was with reference to the depletions
8 caused by groundwater pumping for the cities, towns,
9 and villages in these areas. I'd like to direct our
10 attention, I have up here also on the screen the
11 previous page of the -- of the report. This is under
12 the heading, "Use by Cities, Towns, and Villages." I
13 wanted to take a look at this with you at the language
14 that's being highlighted here. On this facing page to
15 the table, this is -- for the record, it's Colorado
16 Exhibit 4 at Page 122. I'd just like to bring to your
17 attention this language opposite the table which
18 says, "Except for surface supplies in a few instances
19 in some of the tributary areas, the city, town, and
20 village water supplies are practically all obtained by
21 pumping from groundwater which, in turn, has its
22 source in stream flow and in precipitation on the
23 floor of the valleys. From a basin-wide standpoint,
24 therefore, this use constitutes a streamflow
25 depletion."

1 **Doctor, does this give you sufficiently**
2 **additional context to understand that Table 97 and the**
3 **figures we were looking at with respect to depletions**
4 **of streamflow were indicated by the context of this**
5 **table to be depletions of streamflow caused by**
6 **groundwater pumping for cities, towns, and villages?**

7 **MS. BARFIELD:** I'll object to the extent
8 that the question entails Dr. Miltenberger answering a
9 causation question relative to this relationship he's
10 raising.

11 **JUDGE MELLOY:** I'll let Dr. Miltenberger
12 answer.

13 A. I'm sorry. I think I lost the question.

14 **Q. (BY MR. DRAPER) Does this provide sufficient**
15 **context for you to agree that the depletion figures in**
16 **acre-feet that we saw on Table 97 are due almost**
17 **exclusively to groundwater pumping?**

18 A. If I recall the JIR correctly, this
19 particular section goes on for -- into another page.
20 I think I need to read all -- all of that, I think, to
21 have a sufficient context.

22 **Q. All right. So you don't know whether this is**
23 **depletion by groundwater pumping or not that's shown**
24 **in the table, just looking at it as a nonexpert in**
25 **hydrology?**

1 **MS. BARFIELD:** Objection. I'm not even
2 sure what that question means, looking at it as a
3 nonexpert in hydrology? I think that question calls
4 for expert testimony.

5 **JUDGE MELLOY:** I'll sustain that. I
6 think the exhibit pretty much speaks for itself.

7 **MR. DRAPER:** All right. Very good, Your
8 Honor. Thank you. Take that down.

9 **Q. (BY MR. DRAPER)** Doctor, as part of your
10 research in developing your opinions for this case, as
11 I understand it, you investigated documents from some
12 time in the late 1800s to all the way up to the
13 present; isn't that right?

14 **A.** I think that's generally true. I would have
15 to consult our -- our internal database to know the
16 exact chronological span of -- of our research. I
17 should say the documents being collected.

18 **Q.** But you -- you can confirm that you consulted
19 documents both before and after the signing of the
20 Compact, correct?

21 **A.** Yes.

22 **Q.** As I think you confirmed in your deposition,
23 you agree that how the states acted after the 1938
24 signing of the Compact is potentially relevant to
25 understanding what the states understood at that time,

1 correct?

2 A. That's -- that's not my recollection.

3 Q. Let me -- let me read from Page 53 of your
4 deposition of June 8th, 2020, beginning on Line 19
5 where you were asked, "Is it relevant to look at the
6 actions of the parties or documents created by the
7 parties that come after the Compact or the agreement
8 was entered into in order to understand the intentions
9 of the parties?"

10 "ANSWER: It can be."

11 MS. BARFIELD: Your Honor, is this --
12 or, Mr. Draper, is this being shown? I can't see it.
13 It popped up, and then it fell off.

14 MR. DRAPER: We were --

15 JUDGE MELLOY: I think we lost it,
16 Mr. Draper.

17 MR. DRAPER: Okay. Let me see if I can
18 deal with that.

19 JUDGE MELLOY: There we go. We have it
20 back.

21 MR. DRAPER: Yes. Thank you for
22 alerting me to that. We're looking at Line 19 where
23 the question that I read is formulated. You can see
24 there the question and answer that I quoted.

25 Q. (BY MR. DRAPER) Do you -- do you -- seeing

1 that, Dr. Miltenberger, do you still agree with that
2 position?

3 A. I would agree it can be relevant.

4 Q. Very good. Thank you.

5 A. Actually, I think maybe in the -- in my
6 deposition, I might have elaborated a little bit more
7 on my answer there. I think it might be useful for me
8 to see that.

9 Q. Okay. Let's see if we can put that back up.
10 See the following. Is that helpful?

11 A. Yes.

12 Q. All right. And does that change the answer
13 that you gave in your deposition?

14 A. Well, I think it creates a -- a fuller
15 explanation. It can be. It really comes down to -- I
16 think as I explained, it comes down to the research
17 question you're posing.

18 Q. Very good. I wanted to turn our focus to the
19 Compact, the 1938 Compact, which is -- was part of
20 your research in this case. Do you agree that the
21 states understood that in 1938 that once New Mexico
22 delivers water to Elephant Butte Reservoir, that that
23 water is allocated by the Bureau of Reclamation to
24 Project beneficiaries?

25 A. Would you please repeat the question?

1 Q. Yes. Do you agree that the states understood
2 in 1938 that once New Mexico delivers water to
3 Elephant Butte Reservoir, that water is allocated by
4 the Bureau of Reclamation to Project beneficiaries?

5 MS. COLEMAN: I'll object to vague on
6 what "Project beneficiaries" means.

7 JUDGE MELLOY: I'll overrule that.

8 A. Would you repeat the question one more time?
9 I want to be certain I have it right.

10 Q. (BY MR. DRAPER) Yes. Do you agree, Doctor,
11 that the states understood in 1938 that once New
12 Mexico delivers water to Elephant Butte Reservoir,
13 that water is allocated by the Bureau of Reclamation
14 to Project beneficiaries?

15 A. I would agree that the parties understood
16 that the Project was a present use in the basin and
17 that the -- it had to be satisfied.

18 Q. Just ask you to elaborate on that. You would
19 agree, it seems to me, that the Project, as a whole,
20 was one of the uses -- the existing uses in the basin
21 that the Compact sought to protect; is that right?

22 A. That's correct.

23 Q. And as I understand it, you do not have an
24 opinion on how much Project water goes to either state
25 pursuant to the Compact, correct?

1 A. I'm having a difficult time. Would you
2 please repeat the question?

3 Q. I wanted to confirm your deposition testimony
4 that you do not have an opinion on how much Project
5 water goes to either state pursuant to the Compact?

6 A. I think I need to have my memory refreshed.

7 Q. Okay. Let's look at your deposition from
8 October 2nd, 2019, at Page 97. Looking at Line 9, you
9 see the question, "In other words, have you given an
10 opinion on how much water goes to either state
11 pursuant to the Compact?" And the answer is, "No. I
12 think that's beyond my expertise. I did not attempt
13 any quantifications."

14 A. I need to see the whole question, because I
15 think there's other aspects of it above. I mean, I
16 think my meaning here was that I didn't attempt to
17 quantify amounts.

18 Q. All right. Thank you. I think that's
19 consistent, and we can confirm that you did not have
20 -- did not have an opinion as to the specific amounts
21 of Project water goes to either state pursuant to the
22 Compact?

23 A. Again, I would -- I would phrase it this way,
24 I didn't attempt any quantification of amounts.

25 Q. Very good. Thank you. I'd like to clarify

1 something in your report. If you could look at your
2 first expert report, I think it's Texas Exhibit 8, and
3 I think on the --

4 A. I'm just getting a binder.

5 Q. Okay. And I think the exhibit page that
6 we're looking at is Page 2.

7 A. I'm trying to locate a copy of it in the
8 binders I have in front of me.

9 Q. Very good. Just to confirm, you do have on
10 your screen an image of the second page of the
11 exhibit.

12 A. It appears to be so, yes.

13 Q. Okay.

14 MS. BARFIELD: Dr. Miltenberger, it is
15 in Binder 1 of 5, if that helps you. And it comes
16 right after the sequence of a few New Mexico exhibits.

17 A. I'm sorry. What's the exhibit number again?

18 Q. (BY MR. DRAPER) Texas Exhibit 8.

19 A. I have located it. Thank you so much.

20 Q. I'd like to draw your attention, Doctor, to
21 your Opinion 3, which is summarized on this second
22 page of the exhibit in these words. It says, "The Rio
23 Grande Project water supply, circa 1938, included not
24 only the surface flow of the Rio Grande captured in
25 Elephant Butte Reservoir, but also all water tributary

1 to the project including groundwater as well as return
2 flows." Is that still your opinion today?

3 A. I think there's more -- there's more nuance,
4 as expressed in detail in Opinion -- in Opinion 3, but
5 I think it captures the substance of -- of the point I
6 was endeavoring to make.

7 Q. Very good. I just want to clarify really,
8 you mentioned that the Project water supply includes
9 groundwater, and I just wanted to be sure that we
10 understood your opinion here correctly. You're not --
11 you're not suggesting in that opinion that groundwater
12 pumped from wells is a part of the Project water
13 supply, are you?

14 A. I don't discuss wells and pumping in that
15 opinion.

16 Q. I think, and I'd like to get your
17 confirmation here, is that your reference to
18 groundwater is simply a recognition of the fact that
19 some -- some -- some of the water supply at least, the
20 Project water supply, may have been groundwater at
21 some point in the local or general hydrologic cycle;
22 is that what you mean by your reference to
23 groundwater?

24 A. Well, I think you used a number of terms of
25 art, technical terms, terms of art. I think my

1 opinion explores in more detail what I mean by this,
2 and I don't necessarily know if that interfaces with
3 your question.

4 Q. Okay.

5 A. Given I don't have an understanding of some
6 of the -- I don't have an expert understanding of the
7 concepts you presented.

8 Q. Okay. It'd be helpful if you could describe
9 for us what you meant by your reference to groundwater
10 in your opinion.

11 A. I think I have to refresh my memory by
12 reviewing my opinion.

13 Q. All right. I think we can look at this a
14 little more specifically if we go to Page 68 of your
15 report. That's the exhibit page number. It's
16 actually Page 70 of the exhibit, 68 in your -- your
17 own numbering system in your report, but exhibit page
18 70.

19 A. I see that.

20 Q. Okay. I pulled out language from your -- the
21 middle of that page, and I think if we can work our
22 way through this, we can understand what your opinion
23 is as you stated in Opinion No. 3. You're quoting
24 from the 12th Annual Report of the Reclamation Service
25 for 1912 to 1913, released in 1914, which, "Offered

1 this explicit statement with regard to the Rio Grande
2 Project: The United States" -- and I'll just quote it
3 here -- "The United States claims all waste, seepage,
4 spring, and percolating water arising within the
5 project, and proposes to use such water in connection
6 therewith." I think we can also direct your attention
7 to the actual document that you were referring to, and
8 that is Texas Exhibit 659. You can see the language
9 you're actually quoting, and that's at -- I believe
10 it's Page 8, yes, under the heading, "Irrigation
11 Plan." And at the end of the first paragraph here, we
12 can see the same sentence that you quoted is the one
13 that starts, "The United States claims all waste," and
14 we'll just highlight that again. Since you base your
15 opinion explicitly on this language, I wanted to just
16 work through it with you and clarify what your
17 thinking is on that. First of all, do you interpret
18 this statement as referring expressly in any way to
19 groundwater?

20 A. This statement does not make use of the term
21 groundwater.

22 Q. All right. Now, you and I may not be on top
23 of the exact technical meaning of these terms and I
24 don't want to hold you to that, but we can see that
25 it's stated here that as of 1912, the federal

1 government was expressing what it thought it had with
2 respect to the sources of supply for the Project, and
3 they start with the word "waste." I won't try to
4 define that, but that has no specific relation to
5 groundwater in my mind. Would you agree with that?

6 A. Again, just in general, for the whole --
7 whole statement, I mean, I don't -- I don't see the
8 term groundwater.

9 Q. All right. Now, seepage, seepage may be
10 water that at some point has been resident in the
11 groundwater system, as we laymen understand it, but
12 can discharge to the stream and be available for
13 diversion in the Project; is that how you would read
14 that?

15 A. Yes.

16 Q. And then we go to the next element, the
17 spring -- spring water. Now, springs, to your
18 layman's understanding, is -- that's water that
19 discharges from under the ground and becomes surface
20 water at -- at the point of the spring. Would you
21 agree with that?

22 A. I'm a little -- I am a little hesitant
23 because the -- these words may carry -- certainly do
24 carry some very precise geo-hydrological import.
25 Again, I'll just repeat that this particular statement

1 does not use the term groundwater.

2 Q. Okay. Now, the next category of sources of
3 water is -- is stated to be percolating water arising
4 within the Project, and that last language may and
5 probably does refer to all of the categories that
6 we've been talking about, percolating water that
7 arises within the Project. That -- that is -- once --
8 now, percolating may refer to some groundwater, I
9 suppose, but if it arises within the Project in such a
10 way that it's available for diversion, it is -- having
11 arisen, it would be surface water, wouldn't you agree?

12 MS. BARFIELD: I think the question --
13 objection. The question as phrased calls for expert
14 testimony beyond the scope of Dr. Miltenberger's
15 expertise.

16 MR. DRAPER: I would say, Your Honor,
17 I'm just trying to understand his opinion. He quoted
18 this direct language, and a matter of clarification
19 because these are potentially confusing terms.

20 MS. BARFIELD: You're on mute.

21 JUDGE MELLOY: Sorry about that. I'm
22 going to overrule. The witness did testify as to
23 these -- this slide and these terms as supporting his
24 opinion, so I think it's fair to ask him how he
25 understands these -- the meaning of these terms so I

1 will overrule the objection.

2 **MR. DRAPER:** Thank you, Your Honor.

3 **Q. (BY MR. DRAPER)** Doctor, just to restate the
4 question, how do you understand the element of the
5 water supply for the Project that is described here as
6 percolating water arising within the Project?

7 A. Well, I understand this text primarily in the
8 context of -- that the water supply encompassed more
9 -- ultimately, the Project encompassed more than that
10 which was captured in Elephant Butte Reservoir, and I
11 think that's -- that's the substance of it. I know
12 these terms carry some specific weight, but -- in
13 technical terms, but my use of it was to make the
14 point of the United States was making a broad claim to
15 the waters that arise within the Project, and I
16 understood that to mean the waters that were available
17 within the Project.

18 **Q.** And that would be waters available for
19 surface diversions at the -- at the canal headings,
20 correct?

21 A. Well, not necessarily.

22 **Q.** Why not?

23 A. Well, as we also talked about through the --
24 through the teens and twenties, there was a series of
25 drains that were constructed to relieve the

1 waterlogging problem on the Project, and I would
2 imagine those drains also captured this -- this water,
3 and it wasn't simply limited to the canals.

4 Q. But even the drain water would become part of
5 Project supply by becoming available at a downstream
6 diversion point, wouldn't you agree?

7 MS. BARFIELD: Your Honor, I -- I'm
8 going to object again that the line of questioning
9 goes outside the expertise for Dr. Miltenberger. He
10 did testify to what he meant and why he quoted this
11 section, and it seems he's being cross-examined now on
12 issues of hydrology.

13 JUDGE MELLOY: Well, I think -- I think
14 his understanding of how the Project works is fair
15 game. I'll overrule the objection.

16 Q. (BY MR. DRAPER) All right. And I'm -- again,
17 Doctor, I'm just trying to understand your position on
18 this based on your quotation of this particular
19 language in support of your Opinion No. 3. You -- you
20 said there was some qualification because of the
21 existence of drains, but my follow-up question to you
22 is if there is water in drains, those drain to the
23 river and become available at -- at subsequent points
24 of diversion from the river; isn't that how the
25 Project works?

1 A. I think that's generally how I understood the
2 Project to work in this era. I don't -- I can't say
3 that I understand or know that every single drain
4 operated in precisely the manner as that, precisely in
5 that manner.

6 **Q. All right. So based on our discussion here**
7 **under your Opinion No. 3, would you agree that it's**
8 **your opinion -- your opinion that the Project water**
9 **supply is surface water, even though parts of it may**
10 **at some point have been in the -- in a groundwater**
11 **situation?**

12 A. I'm not confident that I can answer that
13 question. I'm not -- I'm not entirely certain at what
14 point surface water and -- groundwater becomes surface
15 water. I mean, if we're talking in very general
16 terms, you have a pump that bring the water out of the
17 surfaces -- from beneath the surfaces of the earth,
18 that could be surface water. So I wouldn't
19 necessarily agree with that.

20 **Q. All right. Are you intending to include in**
21 **your opinion pumped groundwater that is then**
22 **distributed on the surface?**

23 A. I'm intending in my opinion to describe to
24 the best of my ability what the Project water supply
25 was conceptualized in 1938. I think I explain that in

1 more detail that goes beyond simply this quote in my
2 opinion.

3 Q. All right. Well, maybe that's as much
4 clarification as we can obtain. All right. Let me
5 ask your general opinion then. I think it's within
6 the opinions that you are proposing to the Court. Is
7 the Rio Grande Project a surface water project?

8 A. It's a Reclamation project.

9 Q. Is it a Reclamation surface water project?

10 A. My understanding of -- of the Project is that
11 it delivers water through canals and drains and
12 utilizes the channel of the Rio -- of the Rio Grande.
13 I'm not aware of -- as I sit here, I'm not aware of
14 Reclamation characterizing its projects as surface
15 water or -- or only or characterizing projects in that
16 way, particularly in this era.

17 Q. Based on your investigations in this project,
18 do you know whether the Bureau of Reclamation
19 allocates groundwater as part of the operation of the
20 Project?

21 A. I don't know.

22 Q. As part of your investigation here, do you
23 know whether the -- you know, as a historian, whether
24 the Compact allocates -- expressly allocates
25 groundwater?

1 A. I don't recall groundwater appearing in the
2 Compact, the term groundwater appearing in the
3 Compact.

4 **Q.** All right. I'd like to direct your attention
5 to Joint Exhibit 428, particularly -- well, let's just
6 identify this as a excerpt from the -- from a Rio
7 Grande Compact Commission Report, and if I could, I'd
8 like to direct your attention to Page 13 of the
9 exhibit.

10 A. Is this also in the binders in front of me?

11 **MS. BARFIELD:** Dr. Miltenberger, you
12 have two binders that are cross-examination exhibit
13 binders. You'll find Joint 428 in that binder.

14 THE WITNESS: Thank you.

15 **JUDGE MELLOY:** Just so I understand,
16 Joint 428 is the Compact, right?

17 **MR. DRAPER:** Let's go back to the
18 beginning page. Your Honor, this is a Rio Grande
19 Compact Commission Report.

20 **JUDGE MELLOY:** Okay. So the first --
21 the first nine pages is the Compact itself?

22 **MR. DRAPER:** Yes.

23 **JUDGE MELLOY:** Then there's a
24 resolution, then there's the update that changes the
25 gaging station and then rules of the Compact

1 Commission? Okay.

2 MR. DRAPER: Yes. And it's the rules
3 that I'm focusing on at the moment, Your Honor.

4 JUDGE MELLOY: All right. Go ahead.

5 Q. (BY MR. DRAPER) Doctor, do you have that
6 language or that page?

7 A. Yes.

8 Q. Okay. And the language I'm having put up on
9 the screen here is the introduction to the rules and
10 regulations for administration of the Rio Grande
11 Compact. Have you had occasion to look at these rules
12 and regulations?

13 A. I don't recall.

14 Q. Do you know that the -- do you know that the
15 initial rules and regulations, including the language
16 we've highlighted here, were adopted immediately after
17 the Compact itself?

18 A. I'm aware that there were some rules and
19 regulations adopted after the Compact had become
20 effective between the states.

21 Q. And are you aware that this language that
22 we're looking at here is actually the original
23 language that has gone unchanged since they were
24 originally adopted?

25 A. I don't know that for sure looking through

1 the document, which seems to have several amendments
2 to it.

3 Q. Yes. There have been some minor amendments
4 over the years but not to this particular language, as
5 I understand it. So let me ask you specifically, this
6 is the beginning of the rules and regulations, and it
7 states, "A Compact, known as the Rio Grande Compact,
8 between the states of Colorado, New Mexico, and Texas,
9 having become effective on May 31, 1939, by consent of
10 the Congress of the United States, which equitably
11 apportions the waters of the Rio Grande above Fort
12 Quitman and permits each state to develop its water
13 sources at will, subject only to its obligations to
14 deliver water in accordance with the schedules set
15 forth in the Compact." Do you see that language?

16 A. I think it may actually say "water
17 resources."

18 Q. Did I misread it? "Permits each state to
19 develop its water resources at will." I'm sorry if I
20 misstated that. Yes. So this describes the Compact
21 as permitting, "Each state to develop its water
22 sources at will subject to its obligations to deliver
23 water in accordance with the schedule set forth in the
24 Compact." Did I read that correctly?

25 A. Yes.

1 Q. Do you see here a 1938 condition being
2 asserted by the states in these -- in the opening
3 sentence of these regulations?

4 A. I'm not -- I'm not exactly sure how to answer
5 that.

6 Q. You have testified, at least with some
7 reference, to a 1938 condition that you were asked
8 about by your counsel. Looking at the language here
9 at these regulations that were adopted immediately
10 following the Compact, do you see a -- something that
11 could be called a 1938 condition expressed here about
12 the states?

13 A. Given the testimony I gave that chronicled
14 the context for the schedules, which are referenced
15 here, while the words "1938 condition" do not appear
16 here, those schedules capture that idea, and that is
17 referenced here.

18 Q. Very good. And do those schedules apply to
19 the water distribution below Elephant Butte Dam?

20 A. Well, those schedules worked in concert with
21 the normal release figure, as I think I testified to.

22 Q. But the schedules, as I understand, and I
23 think you clarified your use was similar that the
24 schedules that we're talking about are the Article 3
25 and Article 4 schedules for delivery at the

1 Colorado/New Mexico state line and at San Marcial or
2 Elephant Butte Reservoir; is that right?

3 A. Yes. That's -- that's the schedules.

4 Q. And so if I read this language correctly, it
5 says that, "Each state is permitted to develop its
6 water resources at will subject only to those two
7 schedules," that we've just identified?

8 A. Well, it says, "Each state," which I would
9 understand to mean all three states, "Subject only to
10 its obligations to deliver water in accordance." And
11 I believe the Special Master -- there has been a
12 ruling on the concept of deliver relative to release
13 so, again -- and then in the context that I presented
14 as far as the development of the schedules themselves,
15 I -- I think that that condition is -- is captured by
16 this -- by this statement, given the Compact as it was
17 -- as it was drafted, as it was designed.

18 Q. So you would see this as consistent with your
19 thought that there is a 1938 condition in this
20 Compact, the Rio Grande Compact?

21 A. I believe that's been my -- my testimony, and
22 I believe that the testimony I gave relative to the
23 development of the schedules, what the intent behind
24 them was, and their relationship to the release
25 figure, I think they -- they all speak to that, what

1 Texas has called the 1938 condition, what we might
2 think of as the baseline condition.

3 THE WITNESS: Actually, with that, may
4 we take just a brief break, Your Honor, so I can get a
5 bit more water?

6 JUDGE MELLOY: We'll take five minutes.

7 THE WITNESS: Thank you.

8 MR. DRAPER: Very good. Thank you.

9 (Recess.)

10 JUDGE MELLOY: All right. Are we ready
11 to go? Mr. Draper, you may continue.

12 MR. DRAPER: Thank you, Your Honor.

13 Q. (BY MR. DRAPER) Now, we were looking at the
14 -- at the break, we were looking at the -- the rules
15 and regulations of the Compact Commission that were
16 adopted immediately following the ratification of the
17 Compact by Congress. Doctor, I'd like to be sure I
18 understand your -- your position on the 1938 condition
19 that you've referred to. Do you see anything --

20 THE REPORTER: I'm sorry, Mr. Draper.
21 It appears your microphone is off.

22 MR. DRAPER: Thank you. There we go.
23 Sorry.

24 Q. (BY MR. DRAPER) Given this language we're
25 looking at in the rules and regs adopted just after

1 the Compact became effective, what do you mean by this
2 term that you testified about, the 1938 condition?

3 A. Well, I think I've -- I've explained what I
4 see that as being. I mean, in broad terms, it was a
5 limitation on upstream depletions sufficient to
6 satisfy downstream uses as circa 1938. I mean, in its
7 broadest explanation. I give a lot more detail, and I
8 give more detail -- I give a lot more detail in my
9 testimony and in my -- in my reports.

10 Q. But the limitations that are shown here, I
11 think it's consistent with the Compact, are just those
12 in Article 3 and Article 4 that put an obligation on
13 the upstream states to deliver water to two points
14 above -- well, at and above Elephant Butte Dam. You
15 can't draw any inference from that as to whether there
16 would be one similar below the dam when the Compact
17 doesn't have such a schedule below the dam, wouldn't
18 you agree?

19 A. No, I wouldn't.

20 Q. Why not?

21 A. Well, again, the schedules and the release
22 figure were derived in concert, and what's more --
23 again, my understanding is that the Special Master has
24 ruled about what the meaning of deliver constitutes
25 and so that's my answer.

1 **Q.** So if I understand you, where there are
2 **specific numbers that are requirements and limits with**
3 **respect to the reaches above Elephant Butte, there is**
4 **none -- no such explicit condition on the use of water**
5 **below Elephant Butte?**

6 A. Well, again, the -- the schedules and the
7 release figure work as a -- collectively, and the --
8 the agree to which the upstream states could deplete
9 flows were dependent upon being able to satisfy on
10 average 790,000 acre-feet, and I think that's -- as I
11 sit here, that seems like that's made manifest in the
12 power granted to the commissioner for Texas to ask for
13 releases from upstream states. If we're relying
14 solely on this to give us an indication of what the
15 Compact is, we are denying decades of history leading
16 up to this statement and thousands of documents, and
17 that's not what I would conclude.

18 **Q.** Is it your opinion then that the Compact
19 **commissioners, just after the Compact was ratified,**
20 **were ignoring all of the information that you just**
21 **referred to?**

22 A. No. I don't think they're ignoring the
23 information at all. Again, the schedules, as they're
24 set forth, were working in concert with the release
25 figure. That -- that has been my testimony several

1 times.

2 Q. You -- you keep mentioning a release figure.
3 That's not referred to here, is it?

4 A. No, it's not referenced here.

5 Q. And does the release figure, does that
6 determine how water is apportioned in the lower basin?
7 Is that your opinion?

8 A. I don't understand the question.

9 Q. Well, you keep referring to the release
10 figure as the basis for your opinion that there is a
11 1938 condition, and I'm asking you: Where do you find
12 a basis in the release figure for your position on the
13 1938 condition?

14 A. Well, I think as I've explained multiple
15 times, the derivation of the release figure, the
16 derivation of the schedules speak to -- collectively
17 and individually speak to this intent to capture a
18 certain hydrological set of conditions that the states
19 agreed upon. I don't base my opinion solely on the
20 release figure. I base my opinion upon a review of
21 the historical documents, specifically the engineering
22 discussions that -- that were -- that were had and the
23 engineer's own reports and recollections about what
24 their charge was by the Commission, which was to focus
25 on preserving present uses of water, preserving

1 present legitimate uses of water, which is what Tipton
2 said, preserving a status quo, as even the state of
3 engineer for New Mexico indicated in 1968, which is
4 the last time the states were joined in a Compact
5 dispute to my knowledge. So, again, I don't think we
6 can rely on this statement or even this introduction
7 to tell us what the Compact really means. I don't
8 think it captures it. I think we have to go to
9 context, and that's my position -- my position all
10 along. These things don't exist in a vacuum. We need
11 to understand the context to understand what these
12 things mean.

13 Q. Does the prior 1929 temporary Compact provide
14 part of that context?

15 A. I believe it does, yes.

16 Q. Let's turn to U.S. Exhibit 620, if you'd
17 please. I believe that's the 1929 Compact. And I'd
18 like to turn your attention to Article 12.

19 A. US-620?

20 Q. Yes.

21 A. Thank you.

22 Q. All right. Article 12 is on Page 11 of the
23 exhibit, for the record.

24 JUDGE MELLOY: Go ahead.

25 Q. (BY MR. DRAPER) All right. If you can see

1 Article 12, which we've enlarged on the screen, it's a
2 rather short paragraph. It says, "New Mexico agrees
3 with Texas, with the understanding that prior vested
4 rights above and below Elephant Butte Reservoir shall
5 never be impaired hereby, that she will not cause or
6 suffer this water supply of the Elephant Butte
7 Reservoir to be impaired by new or increased diversion
8 or storage within the limits of New Mexico, unless and
9 until such depletion is offset by increase of drainage
10 return." Now, Doctor, you see this language that says
11 that their understanding there in the second line is
12 that prior vested rights above and below Elephant
13 Butte Reservoir shall never be impaired hereby? Do
14 you see that language?

15 A. Yes, I do.

16 Q. All right. So there's a specific reference
17 -- reference here in the temporary Compact that
18 forbids or at least the parties have agreed not to
19 impair rights below Elephant Butte Dam; isn't that
20 right?

21 A. Yes.

22 Q. Does similar language appear in the 1938
23 Compact?

24 A. It doesn't, and I would submit it doesn't
25 need to.

1 **Q. Was it unnecessary in this temporary Compact**
2 **if it was unnecessary in the 1938 Compact?**

3 A. It was necessary in this one.

4 **Q. Okay. Why wasn't it necessary in the 1938**
5 **Compact?**

6 A. Because a 1929 Compact needed to -- it needed
7 to stop depletions to give the parties enough time to
8 gather the information they need to arrive at an
9 equitable apportionment. The 1938 Compact provided
10 for that, and in these schedules and in the release
11 figure, I think it captures what was the aim all along
12 going back to 1925 or '23, which was to apportion the
13 waters of the Rio Grande, and, again, the charge from
14 the Commission to the engineers was to avoid
15 discussion -- discussing relative rights, and instead
16 focus on providing for an apportionment by -- by
17 protecting present uses and simultaneously providing
18 for additional uses upstream.

19 **Q. You refer to present uses, and that is a term**
20 **that has been used in the documents, as well. That**
21 **would include the Compact itself, wouldn't it? I'm**
22 **sorry. I misspoke. That would include the Project**
23 **itself as one of the present uses in the Rio Grande**
24 **Basin at the time?**

25 A. Yes.

1 Q. Would you agree that the Project was operated
2 by the Bureau of Reclamation during this period to
3 protect the Project, correct?

4 A. I would agree that Reclamation operated the
5 Project to protect the Project.

6 Q. Now, before we move away from the difference
7 between the Compacts on this point of control of water
8 uses below the -- below Elephant Butte, on a literal
9 level, there is a difference between the two Compacts,
10 would you agree with me on that?

11 A. Yes. They are two different documents.

12 Q. And they have different language?

13 A. Yes, they do.

14 Q. And they particularly have different language
15 with respect to prior vested rights above and below
16 Elephant Butte Reservoir, correct?

17 A. Well, the language we're seeing here only
18 appears in the 1929 Compact.

19 Q. It does not appear in the 1938 Compact, does
20 it?

21 A. It does not. And there is a context for
22 that, as there is a context for why it's included
23 here.

24 Q. I understand your argument. I'm just going
25 to the Compacts as written have that difference. All

1 right. Doctor, are you aware that there's been
2 previous litigation over the Compact since its
3 adoption?

4 A. Yes.

5 Q. In particular, there have been -- there's
6 been a suit, I think it was filed in 1951, by Texas
7 against -- against New Mexico. Are you aware of that
8 suit?

9 A. Yes.

10 Q. This was in 1951. Did -- did Texas base its
11 suit against New Mexico in 1951 on the groundwater
12 pumping that was occurring and being encouraged by the
13 Bureau of Reclamation at that time?

14 A. My recollection regarding Texas' complaint
15 was relative to the middle Rio Grande, but I would
16 have to consult my documents to be assured, or if
17 there's a specific exhibit in mind, I'd have to
18 examine that to be sure that that's correct.

19 Q. All right. Let me turn your attention to the
20 later litigation. There was later litigation in the
21 mid 1960s, wasn't there?

22 A. It was in the 1960s. I don't recall the
23 exact date.

24 Q. Was that -- was that litigation based on
25 complaints by Texas of the groundwater pumping that

1 had been occurring since the beginning of the drought
2 in the 1940s?

3 A. Again, I would need to consult the filings,
4 but I don't believe it was.

5 Q. With regard to that, I'd like to turn our
6 attention to a reconnaissance report by the Bureau of
7 Reclamation. It's Exhibit US-656. Doctor, have you
8 seen this document before?

9 A. I don't recall.

10 Q. So you're not sure if you have used this as
11 part of the investigation that you did to formulate
12 your opinions in this case?

13 A. I do not, as I sit here.

14 Q. All right.

15 JUDGE MELLOY: Mr. Draper, do you know
16 if this exhibit is in evidence?

17 MR. DRAPER: We did notify the parties
18 of our intent to look at this exhibit, and I'm hearing
19 that it has been admitted, yes.

20 JUDGE MELLOY: All right. Okay. Go
21 ahead.

22 Q. (BY MR. DRAPER) Let's look at Page 6 of the
23 exhibit, if you please. We can see here at the
24 introduction of the report by the Bureau of
25 Reclamation that its purpose is to summarize the

1 information of water users, reconnaissance
2 investigations, and findings of the Bureau of
3 Reclamation with respect to water conservation plans
4 for the Project. If we look at Page 10 of the
5 exhibit, there is a section entitled, "Project
6 Growth." The language there refers to the severe
7 water shortages that the Project has suffered and says
8 that, "Until severe water shortages began to affect
9 the economy, the Project flourished and was recognized
10 as one of the most prosperous developments that the
11 Bureau of Reclamation had built." If we look at Page
12 14 of the report, there's other very helpful language
13 in this report I would suggest, but if we look at the
14 language at the top of the page, and I think it starts
15 on the previous page, it says that, "It now appears
16 that a peak development of water uses in the beginning
17 of a great drought were both ushered in at the change
18 of the half century and during the last
19 five-and-a-half years, the water shortage crises have
20 become more acute with each passing year." Are you
21 aware, Doctor, of the drought that began to affect the
22 Project in the mid to late 1940s and continued into
23 the early 1950s?

24 A. Yes, I'm aware of it.

25 Q. And are you aware of the encouragement by the

1 Bureau of Reclamation during that period that farmers
2 turn to groundwater in order to survive during that
3 dry period? Are you aware of -- of that set of
4 actions by the Bureau of Reclamation?

5 MS. COLEMAN: Objection; calls for facts
6 not in evidence.

7 JUDGE MELLOY: Well, there were some
8 documents, I think, introduced that reference some
9 communications from Reclamation, so I will allow the
10 witness to answer.

11 A. Would you please repeat the question,
12 Mr. Draper?

13 Q. (BY MR. DRAPER) Yes. Based on the language
14 that we have here on the screen, which I read into the
15 record, I wanted to confirm that you are aware of the
16 drought that affected the Project beginning in the mid
17 to late 1940s and continued into the early 1950s?

18 A. Yes, I'm aware of the drought.

19 Q. And you're aware that the Bureau of
20 Reclamation encouraged farmers within the Project to
21 drill and use wells in order to survive during that
22 period -- period of short Project supply?

23 MS. COLEMAN: I'm going to object again;
24 assumes facts not in evidence. The documents don't
25 show that Reclamation encouraged the drilling of

1 wells.

2 **JUDGE MELLOY:** I'm going to sustain that
3 part of it. It's my recollection, as well.

4 **Q. (BY MR. DRAPER)** Let me turn our attention to
5 Page 20 of the exhibit. Here on Page 20, we have the
6 heading, "Pumping of Groundwater" where Reclamation
7 states, "The recent pumping of groundwaters underlying
8 the project lands has been essential to preservation
9 of the established project irrigation." Do you see
10 that language?

11 **A.** Yes.

12 **Q.** How would you interpret that statement?

13 **MS. BARFIELD:** Objection. The question
14 as phrased lacks foundation. Dr. Miltenberger stated
15 in his prior testimony that he's not reviewed or
16 relied upon this document.

17 **MR. DRAPER:** All right. Let me rephrase
18 that.

19 **Q. (BY MR. DRAPER)** Do you see the Bureau of
20 Reclamation asserting here that groundwater pumping
21 within the Project has been essential to the
22 preservation of the Project?

23 **A.** I see it as I read it that recent pumping has
24 been essential to preservation of the established
25 Project irrigation, but this seems to be the start of

1 a much larger discussion that I haven't -- I haven't
2 read.

3 Q. If we look below the language there, we can
4 see that the Bureau set out the specific number of
5 wells that were in operation at that time. You can
6 see the statement, "Available records indicate that
7 the number of wells installed in the irrigated lands
8 below Caballo Reservoir are as follows." And it -- it
9 parses those numbers out between the Rincon, the
10 Mesilla, and the El Paso Valleys and totals them to
11 1,685 wells. If that's true, that's -- that's a
12 substantial number of wells operating in the Project
13 area, wouldn't you agree, Doctor?

14 MS. BARFIELD: Your Honor, the question
15 as phrased is outside the scope of Dr. Miltenberger's
16 historian testimony and lacks foundation in as much as
17 the information comes from a document he has not
18 reviewed or relied upon to support his opinions as a
19 historian.

20 MR. DRAPER: If I may respond, Your
21 Honor, this is well within the period investigated by
22 Dr. Miltenberger, and he went through in great detail
23 all of the sources in the thousands and thousands of
24 documents that he had reviewed, and I think it's
25 reasonable for us to be able to question him about a

1 document that clearly falls within the area that he
2 says he has investigated.

3 **JUDGE MELLOY:** All right. I'm going to
4 overrule.

5 You can answer the question.

6 A. Would you please repeat the question,
7 Mr. Draper?

8 **Q. (BY MR. DRAPER)** Let me ask it this way.
9 Looking at the statement of the Bureau of Reclamation
10 here where it totals the number of wells in the
11 Project area at the time of this report as being 1,685
12 wells serving Project lands, that's not an
13 insignificant number of wells operating within the
14 Project lands, wouldn't you agree, Doctor?

15 A. No.

16 **MS. BARFIELD:** Object to -- go ahead,
17 Dr. Miltenberger.

18 A. No. Because I don't know what threshold
19 constitutes significant. I'm not a -- I'm not a
20 hydro-geologist or groundwater expert. I don't know
21 what that -- what that means.

22 **Q. (BY MR. DRAPER)** All right. Doctor, if I may
23 take us to Page 17 of this document, which is U.S.
24 Exhibit 656. Do you see the language under the
25 heading at the bottom of the page, which

1 reads, "Problems and needs of the Project area," which
2 we are highlighting, which says, and it runs over to
3 the next page, "The problems of the Rio Grande Project
4 are in many ways comparable to those that developed on
5 the Salt River Project in Arizona and the Central
6 Valley Project in California, both of which were
7 developed primarily on the basis of surface water
8 supplies but ultimately became dependent, to a large
9 extent, upon pumping of groundwaters to supplement the
10 surface water supply to meet the Project's needs." If
11 you -- if you see that language, do you agree that
12 that's a correct statement by the Bureau?

13 A. Well, I don't know.

14 Q. All right. Fair enough. Doesn't this
15 indicate an understanding by the Bureau of Reclamation
16 with respect to this -- its operation of this Project
17 that groundwater pumping has become essential to the
18 successful operation of the Project?

19 A. Well, looking at just this text, and, again,
20 I don't recall having previously examined this
21 document, I don't -- I don't see what you just said in
22 -- in these -- in this sentence.

23 Q. Well, the language that I read refers to the
24 fact that this project, like some other mentioned
25 projects there, was developed primarily on the basis

1 of surface water supplies but ultimately became
2 dependent on the pumping of groundwater. Would you
3 agree that that's a correct characterization of the
4 Rio Grande Project?

5 A. I didn't study Project operations into --
6 into this era, so I -- I don't think I can comment on
7 the veracity of the statement.

8 Q. If that's true, would it be consistent with
9 your concept of a 1938 condition?

10 MS. BARFIELD: Objection; lacks
11 foundation based upon the witness' prior testimony.

12 JUDGE MELLOY: I'll sustain that.

13 Q. (BY MR. DRAPER) Doctor, let me ask you about
14 some of the testimony you gave yesterday. I think you
15 referred to the fact that drains were constructed in
16 the Rio Grande Project after the initiation of the
17 Project; is that right?

18 A. Yes.

19 Q. If I understand your testimony correctly, the
20 need for drains was not understood or provided for
21 when the Project was initiated; is that right?

22 A. That's correct.

23 Q. And did -- did the federal government react
24 to that waterlogging, I think you called it, by
25 initiating a change to the Project that involved the

1 construction of drains to drain the water from the
2 water -- waterlogged lands?

3 A. Yes. Reclamation embarked on a Project to
4 drain the waterlogged lands.

5 Q. And that was paid for initially by the
6 federal government, as I understand it; would you
7 agree with that?

8 A. I don't -- I don't recall exactly offhand.

9 Q. You're not aware that the repayment contracts
10 were modified, renegotiated to incorporate the cost,
11 the payback of the -- of the cost incurred by the
12 federal government to construct those drains?

13 A. That sounds familiar, but I would -- I would
14 need to refresh my memory by reference to the -- to
15 the contracts.

16 Q. We've just been looking at some indication of
17 the support of the Bureau of Reclamation for use of
18 wells, but to your knowledge, did the federal
19 government ever fund or pay for the construction of
20 wells to provide groundwater to the Project lands?

21 A. I do not know.

22 MR. DRAPER: Your Honor, if I could have
23 several minutes to just consider whether there's
24 further questions I need to address to
25 Dr. Miltenberger, I would appreciate it.

1 **JUDGE MELLOY:** Well, it's getting pretty
2 close to 3:00. Why don't we take our afternoon break
3 to 3:15. We'll be in recess. Thank you, everyone.

4 **MR. DRAPER:** Very good, Your Honor.

5 (Recess.)

6 **JUDGE MELLOY:** There you are,
7 Mr. Draper. Do you have any more questions?

8 **MR. DRAPER:** Just a couple, Your Honor.

9 **JUDGE MELLOY:** Go ahead.

10 **MR. DRAPER:** Thank you.

11 **Q. (BY MR. DRAPER)** Dr. Miltenberger, in the
12 course of your research as you reported in your expert
13 report, did you find that there was -- there was
14 groundwater pumping for irrigation in the area around
15 Las Cruces and El Paso for irrigation purposes prior
16 to the initiation of the Rio Grande Project?

17 **A.** I'm aware of that. I can't point to a
18 specific document.

19 **Q.** And let me just ask you, is there any express
20 limitation -- excuse me. Is there any express
21 limitation on groundwater pumping in either the 1938
22 contract of the districts and the Department of
23 Interior or in the Compact itself?

24 **A.** I don't think there's any reference to
25 groundwater pumping in either of those documents.

1 **MR. DRAPER:** Thank you, Doctor.

2 With that, Your Honor, I have no further
3 questions at this time for this witness.

4 **JUDGE MELLOY:** All right. Then any
5 redirect, Ms. Barfield?

6 **MS. BARFIELD:** No, Your Honor.

7 **JUDGE MELLOY:** Actually, I guess I
8 should -- I should give Mr. Hartman a chance to ask
9 any questions if he has any. Do you have any
10 questions, Mr. Hartman?

11 **MR. HARTMAN:** Thank you, Your Honor.
12 No, I don't.

13 **JUDGE MELLOY:** All right. Sorry. Ms.
14 Barfield, did you say you had no redirect?

15 **MS. BARFIELD:** That's correct, Your
16 Honor.

17 **JUDGE MELLOY:** All right. Then subject
18 to figuring out where we are with the exhibits, I
19 guess we're done with this witness.

20 How do you want to handle this exhibit
21 issue, Ms. Barfield? I think we need to probably get
22 that resolved before we excuse Dr. Miltenberger unless
23 you think you can do it over the evening, and if you
24 need him for some further testimony, I guess we could
25 do it, but how do you want to handle that?

1 **MS. BARFIELD:** So my thought is, Your
2 Honor, that we can likely do it over the evening. I'm
3 certain that while we continued Dr. Miltenberger's
4 examination today that my team has been working on the
5 issue so I'll circle back with them. When we're done
6 here, I'll figure out where we're at, and we'll try to
7 get some sort of closure by tomorrow. I think we can
8 excuse him with Your Honor's permission if I need to
9 bring him back if we still have any document issues
10 that I'm going to need him to provide some foundation
11 for with your -- I could bring him back to do that.

12 **JUDGE MELLOY:** That's fine.
13 Dr. Miltenberger, you're excused. I know you hope you
14 don't have to come back, but you may at some point,
15 but we'll just have to cross that bridge when we get
16 to it.

17 **THE WITNESS:** Thank you, Your Honor.

18 **JUDGE MELLOY:** So, I guess, is that the
19 end of the Texas and U.S. witnesses?

20 **MS. BARFIELD:** It is, Your Honor.

21 **JUDGE MELLOY:** All right. Then let's --
22 are we going to be changing chairs, so to speak, for
23 our next witness, which I understand will be
24 Dr. Stevens, right?

25 **MS. BARFIELD:** Yes, Your Honor, we are.

1 I was a little unclear on whether we were discussing
2 the Friday objection witness document that we filed
3 between Dr. Miltenberger and Stevens or after Stevens?

4 **JUDGE MELLOY:** After Stevens.

5 **MS. BARFIELD:** Okay. Then I'm going to
6 turn this over to Robert Hoffman.

7 **MR. DRAPER:** And, Your Honor, if we
8 could have a minute or two to shift seats. This will
9 be the beginning of the -- the New Mexico case, and
10 we'll shift some chairs here if we could have a minute
11 or two.

12 **JUDGE MELLOY:** That's fine. We'll take
13 a couple minutes.

14 **MR. DRAPER:** Very good. Thank you.

15 (Recess.)

16 **JUDGE MELLOY:** All right. Are we ready
17 to get started. It looks like we have a few new
18 players here. Ms. Atton; is that correct?

19 **MS. ATTON:** That's correct.

20 **JUDGE MELLOY:** All right. And you're
21 appearing for New Mexico, as I understand?

22 **MS. ATTON:** That's correct.

23 **JUDGE MELLOY:** And, Mr. Hoffman, you're
24 appearing for Texas?

25 **MR. HOFFMAN:** My mute was on. I

1 apologize. I am appearing for Texas.

2 **JUDGE MELLOY:** Okay. Mr. Hartman and
3 Ms. Coleman is still on for Colorado and U.S.

4 Ms. Atton, you may call your witness.

5 **MS. ATTON:** Your Honor, New Mexico calls
6 Dr. Jennifer Stevens to the stand.

7 **JUDGE MELLOY:** Just one second. I need
8 to swear the witness and give her a couple admonitions
9 and then we're going to go over the exhibits before we
10 actually start the examination. I'd ask Dr. Stevens
11 to raise your right hand, please. Do you swear or
12 affirm that the testimony you're about to give will be
13 the truth, the whole truth, and nothing but the truth?

14 **THE WITNESS:** I do.

15 **JUDGE MELLOY:** All right. Dr. Stevens,
16 would you state and spell your name for the record,
17 please?

18 **THE WITNESS:** Jennifer Stevens,
19 J-E-N-N-I-F-E-R, last name Stevens, S-T-E-V-E-N-S.

20 **JUDGE MELLOY:** All right. Dr. Stevens,
21 sort of our standard admonition to all the witnesses
22 and questions are, first of all, is there anyone in
23 the room with you during your testimony?

24 **THE WITNESS:** No.

25 **JUDGE MELLOY:** Do you have any documents

1 that you will be referring to or available to you
2 during your testimony, other than the exhibit books?

3 THE WITNESS: Nothing other than the
4 exhibit books.

5 JUDGE MELLOY: All right. And then I
6 need to advise you that you're not allowed to have any
7 communication devices available to you, including
8 iPads, laptops, iPhones, and so on with any kind of
9 communication features such as texting, e-mail, and so
10 on. Do you understand?

11 THE WITNESS: I do.

12 JUDGE MELLOY: All right. Then let's
13 talk before we start the examination. I have a list
14 of exhibits that New Mexico plans to use. Most of
15 these have already been admitted, as I understand it,
16 Colorado 004, Joint Exhibits 218, 426, Joint 0430,
17 Joint 0444, Joint 446, Joint 435 -- excuse me, it's
18 not joint, that's New Mexico 435, and New Mexico 445.
19 I understand they've all been admitted. New Mexico
20 419 and New Mexico 502 are already in evidence,
21 although 502 was admitted as Texas 610. New Mexico
22 1035, New Mexico 1419 --

23 MR. HOFFMAN: Your Honor, I believe you
24 misspoke about 419. I think it was 499, at least it
25 was on my list. Maybe my list is wrong.

1 **JUDGE MELLOY:** 499 has been admitted,
2 but also there's 1419. Did I misspeak?

3 **MR. HOFFMAN:** No, I don't think so.
4 1419 is on there and admitted.

5 **JUDGE MELLOY:** Okay. Just to go back,
6 so New Mexico 499 has been admitted. New Mexico 1035,
7 New Mexico 1419 have been admitted. New Mexico 1546
8 has been admitted as Texas 0726. New Mexico 1657 has
9 been admitted. New Mexico 2119 has been admitted.
10 New Mexico 2302, 2303, and 3000 have all been
11 admitted. In addition, US-456 is an A exhibit and
12 will be admitted. Texas 513 is also on the list as
13 having been admitted. Then on the cross-examination,
14 Joint Exhibits 206 and 218 have already been admitted,
15 Joint Exhibits 199, 205, 211, 212, 227, 232, 234, 236,
16 245, 246, 255, 259, and 268 are A exhibits and will be
17 admitted. Joint Exhibit 363, 391, 395, 444, 462, 468
18 have all been admitted. New Mexico 45 has been
19 admitted as Texas 607. New Mexico 175, 176, and 435
20 have all been admitted. New Mexico 619 is an A
21 exhibit and will be admitted. New Mexico 1035 and
22 1439 have been admitted. New Mexico 1446, 1461, 1508,
23 1541, 1548, 1554, 1605, 2097 and 2098 are all admitted
24 -- excuse me -- are A exhibits and will be admitted.
25 Texas 008 and Texas 0029 have been admitted. Texas

1 288 and Texas 543 are both A exhibits and will be
2 admitted. Texas 0601, 606, 608, 622, 623, 642, 669,
3 677 have previously been admitted. Now, 677 is the
4 Joint Investigative Report, which I think it's been
5 stipulated is also Colorado 0004, which has been
6 admitted under that number. Texas 683 and 695 are
7 admitted or have been admitted. 698 has been
8 admitted. Texas Demonstrative Stevens No. 1 and Texas
9 Demonstrative Stevens No. 2 are both A exhibits and
10 will be admitted. US-372 is an A exhibit and will be
11 admitted. Likewise, US-373, 374, 377, 509, and 623
12 are all A exhibits and will be admitted. Have I
13 missed anything or misspoke?

14 **MS. ATTON:** Your Honor, can I just have
15 a minute just to check through and make sure we've
16 covered everything? So, Your Honor, I would ask about
17 Texas Exhibits Nos. 526, 532, and 537. They are all
18 --

19 **JUDGE MELLOY:** Excuse me just a second.
20 Okay. On my -- on my sheet, they are not -- there's
21 no indication on whether they're A exhibits, B, or C.

22 **MS. ATTON:** So, Your Honor, my
23 understanding is that it's only Colorado who has
24 objected to these, and if not, it would be Category A.

25 **JUDGE MELLOY:** Well, if Colorado is

1 objecting then we'll -- you'll have to have -- you'll
2 have to move their admission at the appropriate time,
3 and I'll hear Colorado's objections then. Anything
4 else? All right. Then you may proceed, Ms. Atton.

5 **MS. ATTON:** Thank you, Your Honor.

6 DIRECT EXAMINATION

7 BY MS. ATTON:

8 **Q. Dr. Stevens, good afternoon. Could you hear**
9 **me okay, Dr. Stevens?**

10 A. I can hear you. Yes, I apologize. Good
11 afternoon.

12 **Q. Thank you. What is your role in this case?**

13 A. I was hired by the State of New Mexico to
14 serve as the expert historian in this matter.

15 **Q. What were you asked to do?**

16 A. I was asked to examine the history of the Rio
17 Grande Compact of 1938, which, of course, included the
18 history of the Project itself, as well as the history
19 of the joint investigation that's been discussed in
20 some detail, as well as the history of groundwater and
21 the knowledge and understanding of groundwater as it
22 related to the Compact in 1938.

23 **MS. ATTON:** Can I ask for Stevens
24 Demonstrative No. 2 to be put on the screen?

25 **Q. (BY MS. ATTON) We have here on the screen**

1 **Stevens Demonstrative No. 2. Dr. Stevens, does this**
2 **set out here the testimony that you are going to give**
3 **this afternoon?**

4 A. Yes, it does. It states the things I already
5 noted with the exception of No. 3, which is important
6 because it relates to the context within which the
7 1938 Compact was negotiated and finalized, which, of
8 course, is critical to understanding it.

9 **MS. ATTON:** Your Honor, I'd move for the
10 admission of Stevens Demonstrative No. 2.

11 **MR. HOFFMAN:** No objection.

12 **JUDGE MELLOY:** Stevens Demonstrative No.
13 2 is admitted.

14 **Q. (BY MS. ATTON) Dr. Stevens, have you prepared**
15 **any expert reports for this case?**

16 A. I have, yes.

17 **Q. How many reports have you prepared?**

18 A. I prepared my first report in October of 2019
19 and then I submitted a rebuttal report in June of
20 2020. Following that time, I submitted three
21 declarations in support of motions on behalf of the
22 State of New Mexico.

23 **Q. And are your opinions described in your**
24 **reports and in those three declarations?**

25 A. Yes, they are.

1 **MS. ATTON:** Can we bring up Exhibit New
2 Mexico 2097, please?

3 **Q. (BY MS. ATTON) Dr. Stevens, what is Exhibit**
4 **2097?**

5 **A.** That's the cover page of the report I
6 submitted in October of 2019.

7 **MS. ATTON:** Your Honor, I move for the
8 admission of Exhibit New Mexico 2097.

9 **JUDGE MELLOY:** Any objection?

10 **MR. HOFFMAN:** No objection.

11 **MS. COLEMAN:** No objection.

12 **JUDGE MELLOY:** Exhibit 2097 is admitted.

13 **MS. ATTON:** Can I please have New Mexico
14 2098 on the screen?

15 **Q. (BY MS. ATTON) Dr. Stevens, what is this**
16 **exhibit?**

17 **A.** This is the cover page to the rebuttal report
18 that I submitted in June of 2020.

19 **MS. ATTON:** Your Honor, I move to admit
20 New Mexico 2098 into evidence.

21 **MR. HOFFMAN:** Your Honor, I believe you
22 already admitted it, but I have no objection.

23 **JUDGE MELLOY:** If it isn't admitted, it
24 is now.

25 **Q. (BY MS. ATTON) Dr. Stevens, did you provide a**

1 **CV with your reports?**

2 A. I did, yes. You can find that at Appendix B
3 in my report.

4 **Q. And that's Exhibit No. NM-2097, I believe.**

5 **Have you updated that CV?**

6 A. I have, yes.

7 **Q. Does your updated CV contain additional**
8 **information that's relevant to your work in this case?**

9 A. Yes.

10 **MS. ATTON:** Can we bring up New Mexico
11 1508, please?

12 **Q. (BY MS. ATTON) Is this your current CV?**

13 A. I believe it is, yes.

14 **Q. Let's look at your CV for a moment. Where**
15 **are you currently employed?**

16 A. I have my own consulting firm. We call it
17 Stevens Historical Research Associates, or SHRA.

18 **Q. Now, using your CV as a guide, if you will,**
19 **please can you describe your education and experience**
20 **as relevant to this case?**

21 A. Yes. I received my bachelor's in history and
22 political science. We didn't have minors at UC Santa
23 Barbara so two majors in 1993, and then I stayed, I
24 remained at UC Santa Barbara for the following two
25 years and received my master's degree in American

1 history at that time, and then in 2008, I obtained my
2 doctorate from the University of California at Davis
3 in American History.

4 **Q. Now, again, using your CV as a guide, can you**
5 **describe your archival experience?**

6 A. Yes. I have been working in national
7 archives and other archives, academic and municipal
8 corporate archives, et cetera, wide ranging since
9 1995. Actually, before that time because, of course,
10 I had to use archives to write my master's thesis.
11 The range of the archival locations that I've gone to
12 span many branches of the national archives across the
13 entire country. I don't think I've been to every
14 single one, but I've been to a lot of them. Many,
15 many state archives across the country special in
16 academic collections such as the Bancroft library and
17 the Huntington, which are well known to historians and
18 then corporate archives, as well, for some of the
19 clients I've worked for.

20 **Q. Now, Dr. Stevens, are there any awards or**
21 **honors in your CV that you would like to draw the**
22 **Court's attention to?**

23 A. Probably just a couple, yes. The first would
24 be the receipt of two awards from the National Council
25 on Public History. I received the award for

1 excellence in consulting from that organization, as
2 well as a different year, I received an honorable
3 mention for that same award, excellence in consulting,
4 and then just a couple of years ago, I also received a
5 national for the humanities grant. So those are
6 probably two of the things I'm most proud of for my
7 work in this field.

8 **MS. ATTON:** Now, I move to admit New
9 Mexico 1508 into evidence.

10 **JUDGE MELLOY:** Any objection?

11 **MR. HOFFMAN:** No objection.

12 **JUDGE MELLOY:** New Mexico 1508 is
13 admitted.

14 **Q. (BY MS. ATTON) Dr. Stevens, have you studied**
15 **any interstate water Compacts before your work in this**
16 **case?**

17 A. I have, yes.

18 **Q. Can you just briefly describe what Compacts**
19 **you've previously studied?**

20 A. Yes. After I received my master's degree in
21 1995, I began to work under the direction of
22 Dr. Douglas Littlefield, and in the course of my work
23 with him, I worked on the history of two different
24 Compacts, one related to the Republican River and one
25 related to the North Plat River. More recently, under

1 my own business, I have had occasion to examine the
2 history of the California/Nevada Interstate Water
3 Compact and so between those and then this one, of
4 course, the Rio Grande, I have -- I have some
5 knowledge of interstate water Compacts.

6 **Q. Have you investigated water rights and water**
7 **use in the western United States?**

8 A. I have.

9 **Q. Can you just briefly describe that?**

10 A. Sure. From -- since 1995, when I began my
11 work with Dr. Littlefield, I have been engaged in the
12 practice of water history. That work has been done on
13 behalf of many different types of clients from the
14 irrigation districts in different states to state
15 agencies, as well, and so I'm -- I'm quite familiar
16 with the water history in the American west, both as
17 it relates to surface water and groundwater, as many
18 of my cases and -- and matters that I've studied have
19 related to both of those things.

20 **Q. Dr. Stevens, how long have you been studying**
21 **water history?**

22 A. Since 1993. My master's thesis was actually
23 on the history of water, as well, but as a consultant
24 since 1995.

25 **Q. And have you been accepted as a historical**

1 **expert in other court cases?**

2 A. I have.

3 **Q. Can you identify the courts in which you've**
4 **been admitted as a historical expert?**

5 A. Yes. I've been admitted as an expert in
6 three federal district courts that come to mind, North
7 Dakota, Northern Oklahoma, and Eastern Oregon, if I'm
8 not mistaken, and then I've also been admitted as an
9 expert here in the state courts of New Mexico.

10 **Q. Are there any other courts that you can**
11 **recall that you've been admitted in as a historical**
12 **expert in?**

13 A. Yes. I believe, actually, I was admitted as
14 an expert in a tribal court in Eastern Idaho.

15 **Q. Now, before you describe the historical**
16 **research you did in this case, can you please explain**
17 **your methodology and approach to historical research**
18 **for cases like this?**

19 A. Yes. There's a -- it's a fairly typical
20 methodology and won't surprise anybody who's been
21 listening to trial for the last few days. Typically,
22 you start by reading books and reading articles that
23 relate to the subject you're going to be
24 investigating, just to sort of see what has already
25 been written, what's already out there, and also it

1 helps to -- to -- it helps as the researcher to
2 identify what sort of manuscript collections and
3 primary sources you're going to have to go to, to
4 answer the research questions that you're interested
5 in answering. And so that's typically what I do is I
6 start with the secondary sources, identify collections
7 that I want to look at, and -- and then begin to go
8 through that list of places that I need to go. Now,
9 in any historical matter, there may be exceptions, but
10 in any case, you can probably go sort of to the ends
11 of the earth and study things until you're maybe too
12 old to do so. But a lot of times what happens in
13 historical research is you, after you begin to sort of
14 go to the collections that are the most obvious to go
15 to, the most voluminous and you begin to collect these
16 materials, oftentimes, you identify trends in the
17 history that you're looking at and you begin to see a
18 lot of repetition, and at that point, typically the
19 research trips tend to, you know, decrease a little
20 bit in nature and sort of begin to identify what gaps
21 you might still have in your understanding and then go
22 from there. So -- and then you write up your report
23 or your -- or your article, whatever it may be.

24 **Q. Now, with that background, can you please**
25 **describe the specific historical research you did for**

1 **this case?**

2 A. Yes. So I began with looking at materials
3 that have been written. As I mentioned earlier, I've
4 read Doug Littlefield's book, I looked at various
5 other articles and -- and books that relate to the
6 history of the Rio Grande, and then I was also given a
7 rather large volume of material from New Mexico that
8 was, you know, in their -- in their materials already
9 and began to sort through that material, and from that
10 place, I began to devise a research strategy and
11 identify the collections I was going to have to
12 review. And in this matter, because there were key
13 players, right, there was Texas, New Mexico, the
14 United States, I focused on, you know, how to access
15 records that would relate to those different parties
16 and -- and the history of those different parties, as
17 well as, of course, the important individuals that I
18 thought would provide insight to help me answer the
19 questions that I was asking with regard to this
20 matter, and then I did travel, in fact, to those
21 places, conducted a great deal of primary source
22 research, collected documents, copied those documents,
23 came back to my offices in Boise, Idaho, reviewed
24 them, wrote abstracts of them, sorted them into
25 various subject matters that would help me answer the

1 questions I was being asked to investigate and then
2 prepared my report.

3 Q. Now, approximately how many hours would you
4 estimate you've spent familiarizing yourself with the
5 historical record and in formulating the opinions that
6 you have expressed in your reports, your declarations,
7 and the testimony you will give today?

8 A. We've put in about 4,000 hours.

9 Q. And when you say "we," who are you referring
10 to?

11 A. Well, I do have employees, and I've had my
12 employees' assistants over the years. We've been --
13 we were engaged, I believe, in 2013, so there have
14 been -- I have had assistants working on this under my
15 direction, but most of those hours have been put in by
16 me.

17 MS. ATTON: Your Honor, I offer
18 Dr. Stevens as an expert in the area of history based
19 on her historical research in this case, including the
20 history of the Rio Grande, including the Project, the
21 Rio Grande Joint Investigation, and Rio Grande
22 Compact.

23 JUDGE MELLOY: Anyone wish to be heard
24 on that issue?

25 MR. HOFFMAN: No, Your Honor.

1 **MS. COLEMAN:** No, Your Honor.

2 **JUDGE MELLOY:** If not, then Dr. Stevens
3 will be accepted as an expert historian and consult
4 testifying.

5 You may proceed.

6 **MS. ATTON:** Thank you, Your Honor.

7 **Q. (BY MS. ATTON)** Now, Dr. Stevens, before we
8 dive into the specific areas of the historical record,
9 I'd like to ask you to summarize some of the key
10 opinions that you've reached and expressed in your
11 expert reports. Can we please show NM-2097 on the
12 screen? Thank you. I then show we have here on the
13 right of the screen Page 11 of that exhibit. Now,
14 Dr. Stevens, what do we see here on Page 11 of your
15 report?

16 A. So this page lays out the opinions that I
17 offered in my first report in October, 2019.

18 **Q.** Just briefly, would you please just walk
19 through each of these six opinions you set out here to
20 summarize them?

21 A. Yes. So the first opinion that I offer --
22 and I'm not going to read these into the record, but
23 I'll just summarize them. The first one relates to my
24 opinion that the Project was intended to be flexible
25 and to evolve with the times, and we'll talk a little

1 bit about that today.

2 The second opinion that I have, No. 2,
3 relates to my opinion that the Project is intended to
4 be operated as a single unit and was developed that
5 way, as well as providing an equal amount of water to
6 each acre under the Project.

7 My third opinion is related to Hudspeth and
8 my belief that -- not my belief, but the historical
9 records showing that Hudspeth was never intended to be
10 part of the Project and that the Project was intended
11 to operate and everybody expected it to operate as
12 efficiently as possible.

13 My fourth opinion relates to the
14 understanding of the normal release of Elephant --
15 from Elephant Butte from the Compact to be justified
16 based on the needs of irrigable Project acreage and
17 that it was intended to cover Texas' opinions and
18 concerns about water quality.

19 No. 5 is my opinion that relates to the
20 filings for the Project with -- with the -- at the
21 time territory of New Mexico and that those filings
22 were intended to be for surface water and surface
23 water only.

24 The sixth opinion that I offer is that the
25 scientific understanding of the relationship between

1 surface water and groundwater was evolving over time
2 and that the Compact did not intend to allocate or
3 apportion groundwater.

4 **Q. Let's now look at your rebuttal report, and**
5 **that's Exhibit NM 2099 -- 2098. That was my mistake.**
6 **Apologies. Can we also bring up Page 4 in that**
7 **exhibit?**

8 **So, Dr. Stevens, what do we have here on the**
9 **fourth page of your rebuttal report?**

10 A. I offered two rebuttal opinions in this
11 report, and this is the first one, and I'll just
12 summarize that it reemphasizes my opinion regarding
13 groundwater and the absence of discussion or mention
14 of groundwater in the Compact of 1938.

15 **Q. Can we please look now at Page 15 in the same**
16 **exhibit? And the bottom of the page here, we have, I**
17 **believe, your rebuttal opinion No. 2. Can you briefly**
18 **summarize that opinion for us?**

19 A. Yes. This second opinion in my rebuttal
20 report notes that there was improving understanding
21 about the groundwater supply in the Mesilla Valley
22 after the Compact was signed and that the Bureau of
23 Reclamation encouraged pumping as a way to protect and
24 save the project during the period of drought and that
25 varying degrees of pumping have continued throughout

1 New Mexico and Texas ever since that time.

2 Q. Thank you. Now, you mentioned earlier that
3 you've also produced at least three declarations as
4 part of your work in this case. Let's look at the
5 first of those, and that's Exhibit TX 0526.

6 MS. ATTON: So, Your Honor, forgive us.
7 We are finding it. We'll be a minute.

8 Q. (BY MS. ATTON) So we have here Trial Exhibit
9 TX 0526. Dr. Stevens, do you recall -- do you
10 recognize this as the -- as the declaration you've
11 offered in this case?

12 A. I do, yes.

13 Q. And can you briefly summarize, please, the
14 opinions that you expressed in this declaration?

15 A. This is a restatement of some of the opinions
16 that I've already explained from my first report and
17 then primarily as an authentication of documents that
18 you can find in the following pages.

19 MS. ATTON: Your Honor, I move to admit
20 Exhibit TX 0526 into evidence.

21 MR. HOFFMAN: No objection, Your Honor.

22 MS. COLEMAN: No objection.

23 JUDGE MELLOY: Just a second here.

24 Mr. Hartman, I think you were the one who had objected
25 to this. What's your position?

1 **MR. HARTMAN:** No, Your Honor, we never
2 objected, just until this morning and we have no
3 objection to this.

4 **JUDGE MELLOY:** Well, let me ask you
5 this: Do you have objections to 526, 532, or 537?

6 **MR. HARTMAN:** No, Your Honor.

7 **JUDGE MELLOY:** So as I understand it, no
8 one else does either, so they can be admitted as A
9 exhibits and will be -- and will be so admitted. So
10 Texas 526, Texas 532, and Texas 537 are in evidence.

11 **MS. ATTON:** Thank you, Your Honor.

12 **JUDGE MELLOY:** You may proceed.

13 **MS. ATTON:** Could we bring up Exhibit TX
14 532, please?

15 **Q. (BY MS. ATTON)** Dr. Stevens, do you recognize
16 this as your second declaration you produced in this
17 case?

18 A. I do, yes.

19 **Q.** Can you briefly summarize the opinions you
20 expressed in this second declaration?

21 A. Yes. I think that they can be put into four
22 categories, and hopefully I'll remember them all
23 because they're not stated quite as in opinion form as
24 they are in the reports. The first is that
25 groundwater was intended to be a supplemental supply

1 to the Compact -- I'm sorry -- to the Project; second,
2 that the Project acreage was to be divided 57/43
3 between New Mexico and Texas per the contracts of
4 1938; and additionally, that the 1929 and 1938 Compact
5 were quite distinct from each other, that they had
6 important differences; and perhaps if you scroll a few
7 pages in, I might recall what that fourth area was.
8 In any event, I can't recall exactly what the fourth
9 sort of area was, but they were all, again,
10 restatements of previous opinions that I've given in
11 my other reports.

12 **Q. Thank you, Dr. Stevens.**

13 **MS. ATTON:** Can we bring up Texas
14 Exhibit No. 537?

15 **Q. (BY MS. ATTON) Do you recognize this as your**
16 **third declaration you produced in this case?**

17 A. I do, yes.

18 **Q. Can you just briefly summarize the opinions**
19 **you expressed in this third declaration?**

20 A. Yes. I think that this declaration focused
21 primarily on my opinion that the Compact did, in fact,
22 apportion water to New Mexico downstream of the
23 Elephant Butte Dam.

24 **Q. Thank you.**

25 **MS. ATTON:** Now, Your Honor, New Mexico

1 relies on Dr. Stevens' expert reports and these three
2 declarations in their entirety, but in the interest of
3 time and efficiency, we're going to focus Dr. Stevens'
4 testimony today on issues she feels are particularly
5 important for the Court to understand the context to
6 the issues to be decided in this case.

7 **JUDGE MELLOY:** I understand.

8 **Q. (BY MS. ATTON)** Now, Dr. Stevens, this
9 morning, Dr. Miltenberger identified a few areas of
10 disagreement with you. I'd like to clear some of
11 those up before we start. Let's start with the
12 Colorado archives. Did you visit any archives in
13 Colorado during your research for this case, and if
14 not, can you explain why?

15 **A.** The very first place I went when I began my
16 research was the national archives branch in Denver,
17 Colorado, and so I definitely did travel to Colorado.
18 I think what Dr. Miltenberger was getting at is that I
19 did not focus my research on Colorado's
20 interpretations of the Compact, and I didn't
21 necessarily focus my primary source research on the
22 players of Colorado, and that, in fact, is true. I
23 would say it's an overstatement and misleading to say
24 that I ignored Colorado. I most certainly did not.
25 In fact, as I mentioned earlier, what happens,

1 especially with old documents and looking back at the
2 period of time that we're looking at for this
3 particular matter is that you begin to see a lot of
4 repetition, and I don't just mean repetition of the
5 same information over and over. I mean actually the
6 same documents. Back then, they used onion skin, they
7 mimeographed things, so what you find is a lot of
8 material, you know, in many different places, the same
9 material in different places. So, of course, any time
10 I came across materials related to Colorado from
11 Colorado, from Tipton, from Hinderlider,
12 correspondence between the people I was looking at,
13 and any of the Colorado players, I, of course, paid
14 attention to it. But it didn't form a key focus of my
15 research because this matter is between Texas and New
16 Mexico and so that was where -- between those two and
17 the United States is where the primary focus of my
18 research was.

19 **Q. And, Dr. Stevens, Dr. Miltenberger made much**
20 **this morning about his focus on the delivery schedules**
21 **in the Compact. Did you consider the delivery**
22 **schedules in your expert reports and declarations?**

23 A. I absolutely did. To imply that I ignored
24 those is totally not true. And, in fact, I think what
25 I focused on was actually how they got to that point,

1 but I do know where my expertise ends, and I -- you
2 know, I didn't try to do formulas or understand
3 formulas. My focus was really on understanding how
4 the parties were talking to each other and
5 communicating with each other in terms of how they
6 were going to get to the schedules that they ended up
7 putting in the Compact, and so that was really where
8 my focus was. I, of course, paid attention to them.
9 No question about it.

10 **Q. And do you agree that there is a connection**
11 **between the water that's delivered to Elephant Butte**
12 **Reservoir and the amount that then is able to be**
13 **released from that reservoir?**

14 **A. Yes.**

15 **Q. Okay. So, Dr. Stevens, let's now start by**
16 **stepping back and giving the Court some context to the**
17 **history of the Rio Grande, the Project, the 1938**
18 **Compact, and the course of performance of the states**
19 **and Bureau of Reclamation subsequent to the 1938**
20 **Compact.**

21 **MS. ATTON:** Your Honor, I'm going to do
22 my best to avoid duplication, given Dr. Miltenberger's
23 testimony these last few days, but necessarily, there
24 will be a little bit of duplication perhaps, not least
25 in that Dr. Stevens will be addressing a number of the

1 same exhibits.

2 Q. (BY MS. ATTON) Now, Dr. Stevens, can you
3 briefly introduce the Bureau of Reclamation and its
4 role in the development of the American West?

5 A. Yes. So the 19th century was a period in
6 which the United States grew west, as probably won't
7 surprise anybody, but one of the problems that the
8 United States faced was actually settling the west and
9 getting people to come out here and be successful
10 because what they didn't anticipate through the
11 various means of obtaining territory on the west is
12 just how different the climate was, and in the course
13 of the 19th century, various efforts, various laws
14 were passed that were aimed at helping facilitate
15 settlement of the west and actually occupying the
16 territories that now belong to the country, but it
17 turned out that the efforts to sort of provide
18 incentives for private investment to build things like
19 the Elephant Butte Dam and the canal systems was just
20 too great, and it was not as easy to settle the west
21 as these various policies tried to make it, and so
22 finally in 1902, the -- the Reclamation service was
23 passed or the Reclamation Act was passed, also known
24 as the Newlands Act, which was, in fact, a law where
25 the government stepped in to front pay, to pay in

1 advance, the costs of these massive infrastructure
2 projects. And so really the purpose of the -- of the
3 Reclamation Project was to settle the lands, increase
4 the population, and occupy the western United States
5 so that we could be a nation of small farmers. It was
6 an old image in Jefferson's day to create that, and
7 Reclamation became a very important part of that in
8 1902.

9 **Q. Now, I want to ask you about the Rio Grande**
10 **Project Act. How did that act help farmers on the Rio**
11 **Grande?**

12 A. Well, the Rio Grande, as a -- as a stream,
13 was a fairly typical stream in the west. One of the
14 problems, in addition to the arid climate, was the
15 fact that many of the streams were erratic, and the
16 Rio Grande was certainly one of the most erratic in
17 the western United States, and so what would happen is
18 that there would be a great amount of water in the
19 spring, sometimes massive floods, particularly on the
20 Rio Grande, that would bring the snow melt down and
21 provide lots of water, but by the time the growing
22 season ended in August or September, that water had
23 just disappeared, and sometimes in the single year,
24 you would have an incredible flood followed by a dry
25 riverbed. And so the Rio Grande Project Act was one

1 of the first to be passed to authorize one of these
2 Reclamation projects under the 1902 Reclamation Act,
3 and it was aiming to help the farmers in New Mexico,
4 first of all, draw people here so that they would farm
5 the area, and, No. 2, to provide a reliable source of
6 water that could be used throughout the growing season
7 through storing those spring snow melts behind the
8 dam.

9 **Q. What was the expectation for Elephant Butte**
10 **Reservoir in the early days of the Project?**

11 A. The expectation was that it would store water
12 behind Elephant Butte Dam, deliver as we heard 60,000
13 acre-feet to Mexico, and then distribute the remaining
14 of that water to the farmers in Texas and New Mexico
15 and provide that reliability of supply that had been
16 -- not been able to be found with the stream in its
17 natural state.

18 **Q. Now, Dr. Stevens, did you attach a timeline**
19 **to your expert reports?**

20 A. I did. You can find that in Appendix A of my
21 first report.

22 **Q. We have your first report, which is New**
23 **Mexico Exhibit 2097 at Page 97 up on the screen here.**
24 **And have you prepared some demonstrative timelines to**
25 **assist your testimony today?**

1 A. I have, yes, and they're taken from -- this
2 is a rather lengthy timeline, and I have taken certain
3 things from this timeline to put into demonstratives
4 for the purposes of this matter.

5 **Q. Let's bring up Stevens Demonstrative No. 4.**
6 **Now, this covers a period of 1895 through to 1916.**
7 **Can you briefly talk us through the events that you**
8 **have on this timeline?**

9 A. Sure. And I'll be mindful not to repeat
10 anything that's already been testified to that are
11 understood facts in the case. I think I've already
12 covered the 1902 Reclamation Act, and I think
13 yesterday, it was discussed the embargo that was put
14 upstream on the upper Rio Grande was discussed so I
15 won't go into any detail on that. As I mentioned, the
16 1905 Rio Grande Project Act followed something that
17 was discussed yesterday called the National Irrigation
18 Congress, and I just want to point out for the Court
19 that just because it can be -- I think it could be a
20 little confusing to call something a Congress that
21 actually had no bearing in law. This is a voluntary
22 association. It is true that kind of everyone who was
23 anyone came to these meetings, although attendance had
24 sort of dwindled by this point, but this was an
25 important event because it was the place at which

1 Benjamin Hall sort of presented his plans for the Rio
2 Grande Project, obtained agreement from some parties
3 that had been disagreeing about where a dam should be
4 placed, and that, of course, led up then to the 1905
5 Rio Grande Project Act being passed by the United
6 States Congress. Following that time, the United
7 States filed for the Project, filed for water,
8 appropriated the water in the 1906 and 1908 filings in
9 the territory of New Mexico, and that happened nearly
10 at the same time that the United States signed a
11 treaty with Mexico agreeing that behind Elephant Butte
12 Dam would be 60,000 acre-feet to be delivered to
13 Mexico so that was in the form of a treaty. So that
14 all happened sort of at once and is an important
15 context to understand.

16 Because there was some litigation going on
17 with regard to the filing, the private filing for the
18 Elephant Butte Dam, Elephant Butte, although part of,
19 of course, the original plan for the Project wasn't
20 actually authorized to be constructed until 1910,
21 after that litigation had been settled, and so it was
22 in 1910 that that authorization came to pass and then
23 the dam itself was completed in 1916.

24 **MS. ATTON:** Now, you mentioned the
25 1906 and 1908 appropriations, so I'd like to look at

1 those next, but before we do, I move to admit Stevens
2 Demonstrative No. 4 into evidence?

3 **MR. HOFFMAN:** No objection as a
4 demonstrative.

5 **JUDGE MELLOY:** Exhibit 4 is admitted.

6 **MS. ATTON:** Please, can we bring Exhibit
7 Texas 0513 on to the screen?

8 **Q. (BY MS. ATTON) Dr. Stevens, what is this**
9 **exhibit?**

10 A. This is a copy of the letter from 1906 that
11 was submitted to the territorial engineer of New
12 Mexico appropriating water for the Rio Grande Project.

13 **Q. And this is a letter that Dr. Miltenberger**
14 **also identified yesterday; is that right?**

15 A. That's right, yes.

16 **Q. Now, this 1906 letter refers to a 1905 New**
17 **Mexico law. What can you tell us about that law?**

18 A. So this law specifically is referring to
19 surface water. It is the facilitation of -- it was
20 passed in anticipation of facilitating the
21 appropriation of water for projects such as these, and
22 it states here, "Whenever the proper officers of the
23 United States authorized by law to construct
24 irrigation works, shall notify the territorial
25 irrigation engineer that the United States intends to

1 utilize certain specified waters, the waters so
2 described, and unappropriated at the date of such
3 notice, shall not be subject to further appropriation
4 under the laws of New Mexico, and no adverse claims to
5 the use of such waters, initiated subsequent to the
6 date of such notice, shall be recognized under the
7 laws of the territory." And so essentially, this is
8 a, as I read it, a surface water law that the Project
9 filed for its water right under.

10 **MS. ATTON:** Can you please enlarge the
11 last three paragraphs on this same page?

12 **Q. (BY MS. ATTON) And these are paragraphs that**
13 **Dr. Miltenberger also identified, I think, yesterday.**
14 **What is your understanding of what's described here?**

15 **A.** So this is the specific -- the so-called
16 specified waters that I just read from the statute,
17 the New Mexico statute, and it states here in the
18 second one -- second paragraph, "A volume of water
19 equivalent to 730,000 acre-feet per year requiring a
20 maximum diversion or storage of 2 million miner's
21 inches said water to be diverted or stored from the
22 Rio Grande River at a point described as follows," and
23 then it proceeds to describe the location at Elephant
24 Butte Dam. So it specifies the -- No. 1, the amount
25 of water, the volume, and it specifies that it's

1 diverting the water from the river.

2 **MS. ATTON:** Could you please bring up
3 the paragraph at the top of the next page?

4 **Q. (BY MS. ATTON) Dr. Stevens, what's -- what's**
5 **described in this final paragraph of this 1906 notice?**

6 A. So this is more or less just summing up the
7 rest of the letter stating that the United States asks
8 that the waters described to be withheld from further
9 appropriation and that they be protected as
10 contemplated by the statute that's referred to on the
11 first page, that 1905 New Mexico statute.

12 **Q. Now, this letter is signed by a B.M. Hall.**
13 **Who is B.M. Hall, and what was his role at this time?**

14 A. He was the supervising engineer for the Rio
15 Grande Project of the -- at the time it was called the
16 Reclamation service, later the Bureau of Reclamation,
17 and he was the one, as I mentioned a few minutes ago,
18 that presented the plan for the Rio Grande Project at
19 the National Irrigation Congress the previous year.

20 **Q. Let's look at Page 6 of this exhibit. Now,**
21 **what do we have on Page 6?**

22 A. So this is a subsequent letter that was filed
23 by the United States with the territory of New Mexico
24 to comply with a new law that was passed by the state
25 of -- sorry -- by the territory of New Mexico in 1908,

1 so it's a supplemental appropriation of water for the
2 Rio Grande Project.

3 Q. And this 1908 notice refers back to the 1906
4 notice; is that right?

5 A. It does, yes.

6 Q. Let's look at the next page, and let's
7 enlarge, again, the last four paragraphs.

8 MS. ATTON: Could I possibly ask that
9 counsel for Texas puts his microphone on mute unless
10 he wants to make an objection? We're getting a bit of
11 feedback.

12 MR. HOFFMAN: I'm sorry. I will do so.

13 MS. ATTON: Thank you.

14 Q. (BY MS. ATTON) So, Dr. Stevens, the -- the
15 second paragraph here we have on the screen talks
16 about unappropriated water of the Rio Grande and its
17 tributaries. What do you understand this to mean?

18 A. So I understand this to mean basically what
19 it says, which is the water of the Rio Grande and any
20 of the surface flows that come into the Rio Grande, so
21 other rivers, other streams, arroyos, et cetera, said
22 water, again, to be diverted or stored from the Rio
23 Grande River at a point described as follows, and then
24 it again describes the location of Elephant Butte Dam.

25 Q. And, now, this 1908 notice is signed by Louis

1 **C. Hill. Who is he, and what was his role at this**
2 **time?**

3 A. So he was now the new supervising engineer
4 for the Rio Grande Project at this time.

5 **MS. ATTON:** Let's bring up Stevens
6 Demonstrative No. 5.

7 **Q. (BY MS. ATTON) Dr. Stevens, can you describe,**
8 **please, what's on this Demonstrative No. 5?**

9 A. Yes. This is just a simple map -- I tried to
10 make it simple -- that shows the location of the
11 different irrigation districts, the different
12 divisions of the Rio Grande Project, but also the
13 length of it. This is a big project. It's 200 miles
14 along the Rio Grande. It's, of course, maintained and
15 operated or was by the Bureau of Reclamation. I've
16 put a couple of things on here, which -- some of which
17 we've already talked about. The first is that even
18 though Elephant Butte wasn't finished and wasn't
19 constructed until the -- that early part of the teens,
20 construction on the Project itself actually started a
21 little bit earlier than that. There were preexisting
22 canals that needed to be widened, diversions that
23 needed to be built, et cetera. So construction
24 started in 1906, and it's just important -- this goes
25 to my opinion regarding flexibility -- to recognize

1 that things changed a lot on the Project during the
2 course of the period that it was in operation and
3 still changes to this day. For instance, total
4 irrigable acreage was not reached until 1953, and that
5 was 159,768 acres. That included the cushion that was
6 included in the contracts in the 1930s. And then,
7 also, there was a power system that was constructed
8 after the time of the Compact in 1939 to '41. So this
9 is just a map that shows some of those things and
10 gives just some highlights of what happened on the
11 Project during the course of those first 50 or so
12 years.

13 **Q. Who were the intended beneficiaries of the**
14 **Project?**

15 A. There were three. There was the country of
16 Mexico, the farmers in New Mexico, and the farmers in
17 Texas.

18 **MS. ATTON:** Your Honor, I move to admit
19 Stevens Demonstrative No. 5 into evidence.

20 **MR. HOFFMAN:** No objection.

21 **JUDGE MELLOY:** Demonstrative No. 5 is
22 admitted.

23 **Q. (BY MS. ATTON) Now, Dr. Stevens, if you can**
24 **recall, where do you discuss the history to the**
25 **Project in your expert reports?**

1 A. I discuss the history of the Project in the
2 first two chapters of my 2019 report.

3 **MS. ATTON:** For the record, I believe
4 that's New Mexico Exhibit 2097, Pages 14 to 39.

5 Let's go to the next demonstrative,
6 Stevens Demonstrative No. 6.

7 **Q. (BY MS. ATTON) So we have here the next**
8 **chapter of your timeline from 1916 through to 1938.**
9 **Can you briefly talk us through this demonstrative**
10 **stopping first to explain the 1929 temporary Compact**
11 **and then ending for the moment at the joint**
12 **investigation?**

13 A. Sure. So there has been some discussion
14 regarding the drainage system already. I think it's
15 important to understand that New Mexico and the Rio
16 Grande Project was not the only project that
17 Reclamation found themselves in a pickle with after
18 they applied this artificial irrigation to these
19 lands. Several projects throughout the west
20 experienced this same waterlogging problem, and the
21 drainage systems, they -- they reacted relatively
22 quickly. It was pretty impressive when you look at
23 the records to look at how quickly they designed,
24 engineered, and constructed these drains, because the
25 investment that the Reclamation service and the

1 federal government had made to construct the Project
2 as a whole was in danger of -- of basically being at
3 fault. I mean, they were going to fail because these
4 lands became unusable, and they weren't productive
5 anymore. So building that drainage system, it began
6 pretty quickly as soon as the water was being
7 delivered to the lands, and then concluded by the late
8 part of the 1920s. And then importantly, the existing
9 entities that we know today as EBID and EPCWID were
10 formed in 1918. Prior to that, they had been known as
11 water users associations, so that was a somewhat
12 significant change on the Project -- on the Projects,
13 I should say. In 1923, of course, we know that
14 Colorado and New Mexico authorized the formation of
15 the Interstate Compact Commission, and Texas then
16 became part of that in 1925, so you see that on my
17 timeline, as well. Then in 1929, after a few years of
18 on-again/off-again negotiations and trying to come to
19 some conclusions about equitably apportioning the
20 river, they signed what I will call a truce. They do
21 call it the Compact. But it was really intended to be
22 a truce that would halt things on the system so that
23 data could be gathered, and that was signed in 1929.

24 **Q. Now, just on the 1929 temporary Compact for a**
25 **moment, I believe Dr. Miltenberger suggested that the**

1 **1938 Compact was an expansion of the 1929 temporary**
2 **Compact. Do you agree?**

3 A. They are distinct documents, and they were
4 very much intended to be distinct documents. So what
5 happened was in 1929, the parties agreed that -- and
6 Dr. Miltenberger said this, too, that they weren't
7 able to come to an agreement on how to divide the
8 waters of the river. If you delve into it, the
9 problem was that there was not enough data. They
10 didn't have the information they needed with the new
11 developments going on upstream, the withdrawal of the
12 embargo and the new developments that were going on,
13 to determine exactly what was going to happen with the
14 river. For instance, the Middle Rio Grande
15 Conservancy District was in the process of being
16 constructed, and it was expected to return a great
17 deal of water to the stream because it was draining
18 lands. And so between that and many other data gaps
19 that they have, they determined that they were not
20 able to equitably apportion the river at that time, so
21 they signed this truce that was designed to end in
22 1935 with the intent of gathering data in the interim
23 so that they could then come back together and form --
24 you know, come to an agreement about how they were
25 going to divide the water among the three states.

1 Q. While we have your Demonstrative No. 6 on the
2 screen, can you just talk us through the remaining
3 events and documents that are described in this
4 timeline?

5 A. Sure. Of course, almost immediately after
6 they signed the truce in 1929, we had a fairly major
7 event occur worldwide known as the Great Depression,
8 so all of the best-laid intentions to collect data
9 during this time did not occur and so what they found
10 was that they got to 1935, the Compact that they had
11 signed in 1929 was coming to an end, it was set to
12 expire, and none of the data that they were hoping to
13 have gathered by that time had been gathered. At that
14 time we also had a new president. President Roosevelt
15 had been elected in 1932, and he was a huge proponent
16 of planning. He was not just planning of natural
17 resources, but planning cities and planning towns and
18 regional planning among the areas, and he applied that
19 to the natural resources of the west. As you've heard
20 already, the National Resources Committee was formed
21 as part of sort of that bigger idea that he had about
22 -- about planning and they -- the Rio Grande Compact
23 Commission agreed in December, 1935, to allow the
24 National Resources Committee to come in and to do the
25 type of research and gather the kind of data that the

1 parties themselves had just not been able to -- to do
2 themselves over the previous years due to the
3 depression, and so that's an important thing that
4 happened in December, 1935, and it was over the next
5 couple of months that they all came together and
6 determined what the scope of that was going to be, all
7 the parties, Texas, New Mexico, Colorado, the United
8 States. They negotiated together what the scope of
9 that investigation was going to be, and then proceeded
10 to work with the various federal agencies that were
11 part of that investigation to facilitate that. That,
12 of course, is seen here on my timeline between 1936
13 and 1937. In February, 1938, the downstream contract
14 that identified 155,000 acres as the total maximum
15 irrigable acreage plus 3 percent in the Project, those
16 contracts were signed, and then immediately after
17 that, the Compact was signed in March, '38.
18 Importantly, I do have a last thing here on the
19 timeline, and that's the Rio Grande rectification,
20 and, again, that points to the flexibility. I'm sure
21 we'll talk a little bit about that, but it points to
22 the flexibility even after the Compact was signed.
23 This was a really dynamic river, dynamic system, and
24 things were changing, and this was a fairly big change
25 that was happening on the river, and it's important to

1 recognize that that was ongoing during the time that
2 the Compact was negotiated and signed.

3 **MS. ATTON:** Your Honor, I move to admit
4 Stevens Demonstrative No. 6 into evidence.

5 **JUDGE MELLOY:** Any objection.

6 **MR. HOFFMAN:** No objection, Your Honor.

7 **JUDGE MELLOY:** Stevens Demo No. 6 is
8 admitted.

9 **Q. (BY MS. ATTON)** Let's talk about the joint
10 investigation. Now, this is a topic you've discussed
11 at some length in your expert reports and I believe,
12 also, in at least some of your declarations. What was
13 the intent and purpose of the investigation?

14 **A.** So as I mentioned, the parties needed more
15 information about the system. They needed to
16 understand consumptive use of the crops and the
17 phreatophytes in the system, they needed to understand
18 how much acreage there was, they needed to understand
19 what crops were being grown, they needed to understand
20 return flows, water supply, storage opportunities, and
21 so this investigation was an effort by the federal
22 government, a collaborative effort between the federal
23 government agencies who were involved and the three
24 states to gather that data so that they could, in
25 fact, form an understanding of the system that would

1 be the foundation of the signing of the Compact.

2 **Q. So who were the key people in the entities**
3 **who were involved in this investigation?**

4 A. So I already mentioned the National Resources
5 Committee, and they sent some representatives to the
6 Rio Grande Compact Commission to discuss it. The
7 agencies that were involved -- there were actually
8 many. They had what they call material assistants for
9 many of the different federal agencies, but the key
10 agencies involved were the U.S. Geological Survey, the
11 Bureau of Reclamation, the Bureau of Agricultural
12 Engineering, and the Bureau of Plant Industry. And
13 then, again, there were a lot of other agencies that
14 provided assistance, as well.

15 **Q. Let's look at some correspondence about this**
16 **investigation. We have Exhibit No. NM 2302. So we**
17 **have here a letter dated January 27, 1936. Do you see**
18 **that?**

19 A. I do.

20 **Q. And this is a letter from Raymond Hill to**
21 **Mr. Frank Clayton. Do you see that?**

22 A. Yes. I do.

23 **Q. Can you just identify and refresh our**
24 **memories who Raymond Hill and Frank Clayton are?**

25 A. Yes. Raymond Hill was the engineer advisor

1 for the State of Texas to the Rio Grande Compact
2 Commission, and Frank Clayton, by this time, was the
3 Compact Commissioner for the State of Texas.

4 **Q. Now, what was the context of this letter?**

5 A. So this is just about a month after the
6 National Resources Committee representatives had come
7 to represent -- or to present to the Rio Grande
8 Compact Commission, their ideas for the Rio Grande
9 Joint Investigation, and this is Raymond Hill writing
10 to Frank Clayton, so the engineer for Texas writing to
11 the commissioner of -- for Texas regarding his
12 thoughts about the scope of that investigation.

13 **Q. Let's look at what is said in this letter**
14 **about groundwater. Please, can you enlarge the second**
15 **paragraph on the first page starting at Line 16?**

16 **Perfect. Thank you.**

17 **Now, this is a passage that's already has**
18 **been identified by Dr. Miltenberger. Can you please**
19 **explain your understanding of what is stated here**
20 **providing some context?**

21 A. Yes. So this was during the period of time
22 immediately after the National Resources Committee had
23 presented their ideas to the Commission when the
24 different parties, the different states, were sort of
25 talking amongst themselves about exactly what the

1 scope of this investigation was going to be, and so
2 Hill says here, "I also know that the U.S. Geological
3 Survey asked for about \$60,000 to cover investigation
4 of groundwater, with the idea that they might indulge
5 in a lot of geophysical work which probably will
6 neither be necessary nor particularly desirable.
7 Groundwater supplies along the Rio Grande are of
8 little importance in relation to the total supply."

9 **Q. Let's look at Page 3 of this letter and**
10 **enlarge the paragraph in the middle of the page**
11 **starting, "Taking the various items." What does**
12 **Mr. Hill say in this part of his letter concerning**
13 **groundwater?**

14 A. He states, and I'll just read from the
15 letter, "I consider, however, that underground water
16 studies should be limited in extent, except possibly
17 in the San Luis Valley, and not there unless stations
18 are favorable to the development of groundwater."

19 **Q. What is your understanding of what he's**
20 **saying in this passage?**

21 A. So earlier in testimony, it's been said that
22 people were concerned -- the parties were concerned
23 about this study going too far, that there were
24 concerns about the social impact, that the National
25 Resources Committee wanted to study things that were

1 maybe outside of the scope, and that's definitely
2 true. But Texas made a concerted effort, and Hill
3 made a concerted plea to Clayton to really limit the
4 amount of study that was being done on underground
5 water, and that continues to play out over the next
6 little while here and ends up being the case and how
7 the investigation actually developed over the next
8 couple of years.

9 **Q. Now, Dr. Miltenberger testified earlier today**
10 **that Texas had no veto power over the joint**
11 **investigation. Do you agree?**

12 A. I absolutely do agree with that. Yeah. It
13 was a -- it was a collaborative effort to scope this
14 project, and this was one thing that Texas really kind
15 of went to the mat on and said, you know, we really
16 don't want to spend this much on groundwater study.
17 In fact, they went as far as to say that they had
18 their own information, they were doing work with the
19 USGS in El Paso at the time, and they did not want to
20 fund additional underground water studies in this
21 particular investigation.

22 **Q. Let's look at a letter sent days later from**
23 **Mr. Clayton to the National Resources Committee.**
24 **That's Exhibit No. NM 2303. Now, this is a letter**
25 **dated February 1st, 1936. Just remind us for a moment**

1 **about who the National Resources Committee are.**

2 A. So this letter is from Frank Clayton after he
3 received the letter from Raymond Hill, and he is
4 writing to the National Resources Committee, which is
5 taking charge of this currently being discussed Rio
6 Grande joint investigation.

7 **Q. Let's look at Page 2 of that letter, and can**
8 **you enlarge the paragraph second up from the bottom,**
9 **the paragraph titled, "Organization of Investigation"?**
10 **Now, what does Mr. Clayton describe in this passage?**

11 A. So you can see Mr. Hill's language directly
12 in this paragraph, and, again, this is now the Texas
13 commissioner to the Rio Grande Compact Commission
14 writing to the National Resources Committee, and he
15 says, "We consider, however, that underground water
16 studies should be limited in extent, except probably
17 in the San Luis Valley and not there unless stations
18 are favorable to the development of groundwater." And
19 then he goes onto say, "Studies of return flow and of
20 present waste and losses by the geological survey and
21 Bureau of Agricultural Engineering are probably of the
22 greatest importance." So, you know, he's concerned
23 about return flows certainly, but he does, in fact,
24 state exactly what Hill stated to him, which is that
25 he wanted -- Texas wanted underground studies to be

1 limited in extent.

2 Q. Now, you've read the Rio Grande Joint
3 Investigation Report that was published in 1938; is
4 that right?

5 A. I have read the whole thing.

6 Q. So --

7 A. It's rather large.

8 Q. Was an investigation done as to groundwater
9 underlying project acres in that report?

10 A. A study was done on groundwater, but only
11 above Elephant Butte.

12 Q. Let's look at the Joint Investigation Report.
13 That's Exhibit No. Colorado 0004. Do you recognize
14 this document as the February, 1938, report?

15 A. Yes.

16 Q. Okay. Now, just before we start looking at
17 some pages in this report, how did the Compact
18 Commission determine the scope of the Joint
19 Investigation?

20 A. So as I mentioned, they entertained the
21 members of the National Resources Committee in
22 December of 1935 and discussed it with them, and then
23 they had this back and forth with the National
24 Resources Committee, and, of course, amongst
25 themselves, as well, and eventually they came and

1 signed a memorandum of agreement and then there were
2 several other documents that were signed with each
3 individual agency that identified and scoped the
4 nature of the investigation that was going to go
5 forward.

6 Q. Let's look at a letter of Pages 8 and 9 of
7 this report. If you could just enlarge for a moment
8 the date and the addressee and the signature block.
9 So this is a letter in the Joint Investigation Report
10 from Frank Adams, Harlan H. Barrows to Mr. Abel
11 Wolman. Could you just identify who these people are
12 and what their roles are at this time?

13 A. Abel Wolman was the chair of the water
14 resources committee, which as we heard yesterday, was
15 a sub area of the National Resources Committee, and
16 Frank Adams and Harlan Barrows were the two members of
17 the National Resources Committee that were going to
18 lead and did end up leading the Rio Grande Joint
19 Investigation, so they're signing off on their work
20 here and transmitting the report to the parties.

21 Q. And the date we see at the top of this first
22 page is August 10, 1937; is that right?

23 A. That's right, yes.

24 Q. Can you please explain this letter in its
25 context?

1 A. So in the 1930s, there was, as I mentioned, a
2 real passion by the administration for planning, and
3 this is one of the several different areas of water
4 resources planning that was going on during this
5 administration, and this letter is from Frank Adams,
6 from Harlan Barrows, sort of pridefully saying, you
7 know, we really accomplished something major here, and
8 they really had. They had gathered an immense amount
9 of data in a very short period of time, and that's
10 what this letter is, is transmitting the results of
11 that investigation.

12 **Q. Let's look at the fifth paragraph on the**
13 **first page of the letter, which is Page 8 of this**
14 **exhibit, and particularly at the first six lines of**
15 **that paragraph. And just for ease of reading for this**
16 **document, we -- I think you've got a demonstrative,**
17 **Dr. Stevens, so could we bring up Stevens**
18 **Demonstrative No. 7?**

19 So we have here the same passage we've just
20 blown up of the report, and you've had it here typed
21 out so that we can all read it much easier. Now, what
22 is described in this passage of the report?

23 A. This is describing the term that he uses as
24 the cordial willingness with which the official
25 representatives of Colorado, New Mexico, and Texas

1 entered into the undertaking exemplifying constructive
2 statesmanship. So really what this is saying here is
3 that it says, "For the first time" -- toward the
4 beginning of this, "For the first time, states engaged
5 in such a controversy, joined with one another and
6 with the federal government and then endeavored to
7 find a satisfactory basis for the allocation of the
8 waters of the river through the assembly of factual
9 data essential to such an allocation," and then says
10 this thing about cordial willingness, which maybe is
11 hard to believe today but is true. These parties
12 really came together and demonstrated an immense
13 amount of collaboration to come together and gather
14 this data so that they could come up with a solution
15 and a to a major problem they experienced together
16 over the previous several decades.

17 **Q. Just so the record is clear, this is a**
18 **passage within the August, 1937, letter that we were**
19 **looking at a moment ago, isn't it?**

20 A. Yes. It is.

21 **Q. Okay. And in the first line here, there's**
22 **the term unique. Now, would you agree with that term**
23 **and how unique was the joint investigation?**

24 A. It was. This was a unique approach, as it
25 says here, and it was a unique approach to the

1 underlying problems of a grave controversy, and it
2 really was. I mean, this idea of planning like this
3 for an entire basin and then coming together with all
4 these parties that had been at odds with one another
5 was, in fact, unique, and represented a moment in
6 time, I would say, where there was a lot of hope about
7 how these folks could, in fact, divide this limited
8 supply.

9 **Q. Now, just to provide a little bit of context**
10 **before we look at specific sections of this report,**
11 **let's look briefly at the table of contents, and**
12 **that's on Page 11. Dr. Stevens, just briefly, can you**
13 **explain what's contained in each of the parts we have**
14 **here?**

15 A. Yes. So Part 1, you can find an overview of
16 each of the subsequent parts so, you don't have to
17 read all of the details of Parts 2 through 5. So Part
18 1 really provides sort of that overview of each
19 individual section, and Part 2 then is written by the
20 U.S. Geological Survey and reports specifically on
21 groundwater resources. Part 3 is the report of the
22 U.S. Bureau of Agricultural Engineering that looked at
23 water utilization and consumptive use, and then Part 4
24 is the report of the Bureau of Plant Industry that
25 looked at water quality and, of course, they were

1 joined with the U.S. Geological Survey in that
2 examination, and then finally the last part, Part 5,
3 is the report of the U.S. Bureau of Reclamation, who
4 looked at the water -- the potential for importing
5 water with trans-basin diversions and then storage
6 possibilities, as well.

7 Q. Let's look at Part 1, Section 1 of the
8 report, and that's at Page 21 -- rather, it starts at
9 Page 21. Now, just briefly, what's described in this
10 section of the report?

11 A. This is the introduction, and it basically
12 lays out a summary of what can be found in the rest of
13 the report. It defines the geographic location and
14 essentially what's been done over the previous 18
15 months or so to come up with this report.

16 Q. Let's look at a passage on Page 26 that is
17 within this Part 1, Section 1. Can you enlarge the
18 first paragraph under the title, "The problem"? Okay.
19 And thankfully we have another one of your
20 demonstratives, Demonstrative No. 8, that's much
21 easier to read, but reproduces this very same passage.
22 Now, what is described with this passage of the
23 report?

24 A. This passage of the report lays out what it
25 calls the problem, very simply, and it states

1 here, "The essential water problem of the Upper Rio
2 Grande Basin is the division of the water supply
3 between the San Luis section of Colorado, the Middle
4 section of New Mexico, and the Elephant Butte to Fort
5 Quitman section of New Mexico and Texas, with due
6 consideration to past and present uses and
7 requirements and to future development."

8 **Q. Now, there's a reference here to future**
9 **development. What do you understand that to mean?**

10 A. There are mentions that use similar language
11 to this throughout the entire Rio Grande Joint
12 Investigation Report. Frequently in each section, you
13 can find references to prospective developments,
14 future developments, future population growth, et
15 cetera, so this is really just referencing that as
16 they did this study, they didn't just look at the
17 past, they didn't just look at the present, but they
18 also were taking into consideration what the future
19 needs of the basin were going to be.

20 **Q. And by "the basin," you mean the Project**
21 **area?**

22 A. No. I mean the entire area from up in San
23 Luis Valley all the way down to Fort Quitman,
24 including the Project area.

25 **MS. ATTON:** And, Your Honor, I move to

1 admit Stevens Demonstrative No. 7 and 8.

2 MR. HOFFMAN: No objection.

3 JUDGE MELLOY: Exhibits 7 and 8 are
4 admitted.

5 Q. (BY MS. ATTON) Let's go back to the report,
6 and if you could take us to Page 314 and enlarge the
7 title and first paragraph on that page. So this is
8 Part 3, Section 1 of the Joint Investigation Report.
9 Briefly, Dr. Stevens, what's described in this
10 section?

11 A. As I mentioned earlier, Part 3 was authored
12 by the Bureau of Agricultural Engineering, whose job
13 in this particular investigation was to examine
14 consumptive use of water throughout the basin.

15 Q. Let's look at a page in this section of the
16 report as Page 315, and if you could enlarge, thank
17 you, the second paragraph in the right-hand column.
18 And, again, because this is a little tricky to read,
19 we have -- we have a demonstrative, so let's -- let's
20 go to that demonstrative, Stevens No. 9. Okay. And I
21 believe here, Dr. Stevens, we've truncated that large
22 passage down, and you're going to focus on just a few
23 elements of that passage; is that right?

24 A. Yes. That's correct. So this comes from
25 that report regarding consumptive use, and it states

1 here, "However, the estimates presented in this report
2 must be regarded as qualified by the following
3 considerations," and then in the full section, it
4 lists a couple, and then the third one is, "Qualified
5 by the following considerations, 3, the history of
6 agriculture has been marked by so many drastic shifts
7 as to suggest the possibility of future changes which
8 will substantially alter the water requirements of the
9 basin's major divisions. For instance, economic or
10 other events not now foreseen or predicted might bring
11 about crop subs -- sorry -- might bring about crop
12 substitutions in the Mesilla Valley as important as
13 the relatively recent introduction of cotton.

14 **Q. Was this an example of the future development**
15 **that was investigated and described in the joint**
16 **investigation report?**

17 A. Yes, it is. This is a nice description and
18 nice example of the specifics, so it's not just sort
19 of this generic, oh, let's look to the future, but
20 this is specifically saying, you know, in recent
21 years, we've seen cotton introduced into the Mesilla
22 Valley, and we may in the future see other crop
23 substitutions that may be legally important and might
24 actually change the water requirements of the basin's
25 major divisions. That's the language that they use

1 here. So they're being very specific. It's not just,
2 oh, let's look at the future, but this is one of the
3 things we can actually expect to happen in the future,
4 and we need to plan for it.

5 **Q. Let's look at another exhibit.**

6 **MS. ATTON:** Can you bring up US-456?
7 Actually, before we do, apologies, I move to admit
8 Stevens Demonstrative No. 9 into evidence.

9 **MR. HOFFMAN:** No objection, Your Honor.

10 **JUDGE MELLOY:** No. 9 is admitted.

11 **Q. (BY MS. ATTON) So, Dr. Stevens, do you**
12 **recognize the exhibit we have here on the screen?**

13 **A.** I do, yes.

14 **Q. And what is this exhibit?**

15 **A.** This is the -- this is a recordation of the
16 proceedings of the Rio Grande Compact Commission from
17 December 2nd and 3rd, 1935.

18 **Q. To put this document in context, December,**
19 **1935, is shortly before the joint investigation**
20 **started; is that right?**

21 **A.** That's exactly right, yes.

22 **Q. Okay. Let's look at Page 2 of this exhibit,**
23 **and if you could please enlarge the first five lines.**
24 **So in the first few lines here of this exhibit, and**
25 **that's the proceedings of the Rio Grande Compact**

1 Commission on December 2nd and 3rd, 1935, there's a
2 reference here to Mr. Clayton.

3 A. Yes.

4 Q. Was this the first meeting of the Compact
5 Commission where the commissioner for Texas,
6 Mr. Clayton, attended?

7 A. Yes, that's correct.

8 Q. Just so the record is clear here, we're
9 looking at U.S. Exhibit No. 456. Now, could you
10 please enlarge --

11 JUDGE MELLOY: Just a second. What did
12 you just say? I'm sorry. Could you repeat what you
13 just said?

14 MS. ATTON: I just wanted to make sure
15 that the record was clear, that we were looking at
16 U.S. Exhibit 456. I think this has been admitted into
17 evidence.

18 JUDGE MELLOY: Yes. It is in evidence.
19 All right. Go ahead.

20 MS. ATTON: Could you please enlarge the
21 last paragraph on this page? Thank you.

22 Q. (BY MS. ATTON) So what is reported in this
23 passage, Dr. Stevens?

24 A. As I mentioned, the National Resources
25 Committee was offering its services to the Rio Grande

1 Compact Commission, and what we have here is two
2 representatives of that committee, Professor Harlan
3 Barrows from University of Chicago, and Professor
4 Frank Adams from the University of California from
5 Berkeley, and they're coming to present their ideas
6 for the joint investigation to the rest of the Compact
7 Commission.

8 **Q. If I recall correctly, Professor Barrows and**
9 **Professor Adams were the authors of the letter we**
10 **looked at, the August, 1937, letter at the front of**
11 **this Joint Investigation Report; is that right?**

12 A. That's correct. They ultimately spearheaded
13 the whole investigation, and they were in charge of
14 it.

15 **Q. Let's look at Page 6 of this exhibit. And if**
16 **you could please enlarge the first half of the last**
17 **paragraph on this page. What do we -- what is**
18 **described in this passage of the -- of the document?**

19 A. So this is Professor Barrows coming and
20 basically taking the floor at the commission hearing
21 or at the commission meeting, and he is presenting for
22 the first time how he can assist with the gathering of
23 data and what that data can -- can look at and should
24 be looking at.

25 **Q. So we're still sticking here with his**

1 presentation, but skipping forward a little bit to a
2 passage that crosses Pages 7 and 8, if we could
3 enlarge that. So it's a passage starting a little bit
4 further up than that. Let's bring up the last
5 paragraph on Page 7 and the first two paragraphs on
6 the following page. So we're going to have to break
7 these up a little bit because it's quite a long
8 passage, but let's stick with where we are here on
9 Page 7 for the moment. What is -- what is -- can you
10 describe what Professor Barrows is presenting or
11 describing to the Commission in this part of the
12 minutes?

13 A. Yes, I can. So if you look in the middle of
14 the paragraph, after the sentence that ends, "upper
15 Rio Grande area," and starting with, "The matters,"
16 I'll just read this into the record because I think
17 it's significant to understand what he is laying out
18 to the Rio Grande Compact Commission. He starts, "The
19 matters of immediate concern to you, undoubtedly, have
20 to do with equitable allocation of water among the
21 several states, but we assume confidently that you are
22 also looking forward -- that you are looking forward
23 also to complete utilization ultimately, to the most
24 efficient and effective control of the waters of this
25 great area. What," he asks, "in the long run will be

1 your needs for water, not for irrigation supply simply
2 but for all other purposes, for city and town water
3 supply, for industry and the like. What are the
4 prospects with respect to growth in population, and
5 the prospects for now and greater needs for water
6 associated with that growth? What are the
7 possibilities for decentralized industry, involving
8 the use of more or less water? What are your
9 prospective, no less than your existing, aggregate
10 needs? And to what extent can these prospective needs
11 be met effectively?" And then, finally, "What are the
12 possibilities of meeting them by small-scale storage
13 and large-scale transmountain diversion, by increased
14 utilization of groundwaters," and then he goes on, but
15 that's the significant chunk I wanted to read in
16 there.

17 **Q. So what do you understand Professor Barrows**
18 **to be saying in this part of the commission minutes?**

19 A. Well, again, he's laying out the intent of
20 the investigation, which is not just to look at the
21 past and the present, but also to look to the future,
22 and, of course, he lays out the various opportunities
23 for supply and includes in that groundwater in terms
24 of better utilization of groundwaters.

25 **Q. Let's look at the first two paragraphs of the**

1 next page where this passage continues. I want to ask
2 you, Dr. Stevens, about if you could look at the first
3 full sentence here, you see that at the top it
4 says, "What from a longer-term view," longer being
5 underlined.

6 A. Yes.

7 Q. See that? Okay. Can you consider this part,
8 that sentence through to the end of the passage we see
9 on the page here and then describe for the Court what
10 Professor Barrows is reporting in his presentation to
11 the Rio Grande Compact Commission?

12 A. Yes. So this is a continuation from the
13 previous passage. It says, "What, from that
14 longer-term view," with that emphasized, "Are the
15 relationships between the supply of water that may be
16 rendered available, on the one hand, and the needs for
17 water, on the other hand? Precisely, what, again, in
18 the long run, no less than at present, are the
19 problems which are of mutual concern to the three
20 states? And what problems are of concern only to the
21 individual states?" So, again, he's really
22 emphasizing the significance of the study to the
23 long-term planning of the basin.

24 Q. And if I could draw your attention to the
25 next passage and the second full sentence in that

1 passage starting, "Surely, you are concerned with," if
2 you can see that. Can you describe, please, what
3 Professor Barrows is describing in this part of his
4 presentation?

5 A. Yes. So, again, emphasizing the longer-term
6 view, he states, "Surely, you are concerned with that
7 longer view, no less than with the problems that
8 immediately and urgently face you for solution. I
9 repeat that we thought such an investigation as
10 proposed might be useful in all three connections, 1,
11 in the collusion of your immediate and urgent
12 problems; 2, in the facilitation of our work under the
13 executive order," which is related to an executive
14 order that was issued by President Roosevelt, "and, 3,
15 in the procurement of data indispensable to sound,
16 long-term planning for the drainage area in the common
17 interest of all the people who live there, and who are
18 likely to be there in a period of, say -- let's say
19 several decades." So not even just the immediate
20 future, but way down the line.

21 Q. Let's look back at the Joint Investigation
22 Report. That's Exhibit Colorado 4, and specifically
23 at Page 33 of that report. Now, this is Part 1,
24 Section 2 of this report. Briefly, can you describe
25 what's -- what's reported in this section?

1 A. This is a section related to the water
2 supply.

3 Q. Let's look at a passage in this section on
4 Page 80 of the exhibit, and it's in the left-hand
5 column under the title -- the first paragraph under
6 the title, "Rincon, Mesilla, and El Paso Valleys."
7 And, again, I think, Dr. Stevens, you prepared a
8 demonstrative on that, and it's Demonstrative No. 10,
9 which helpfully you've typed it out so it's easier for
10 us all to read. Now, what is reported in this passage
11 in the Joint Investigation Report?

12 A. So as I mentioned a minute ago, this is the
13 section of the report that relates to water supply,
14 and this is, of course, the report following the
15 investigation, and it states here under a
16 heading, "Rincon, Mesilla, and El Paso Valleys," all
17 of which are downstream from effects of pumping Dam.
18 It says, "Groundwater data for these valleys are very
19 meager and no study of groundwater conditions in them
20 was included in the Rio Grande joint investigation.
21 These valleys comprise the Rio Grande Project, which
22 is well provided with open drains that satisfactorily
23 maintain groundwater levels at the depths below ground
24 surface required to prevent waterlogging and seeping
25 of the lands."

1 **Q.** Now, you've reviewed the Joint Investigation
2 **Report.** Do you agree that the groundwater data in it
3 **concerning the Project lands is meager?**

4 **A.** Yes.

5 **Q.** Can you explain here the reference to open
6 **drains?**

7 **A.** Yes. The discussion and concern over
8 groundwater since the construction of the Project had
9 been primarily with what I mentioned earlier, which
10 was the waterlogging of the lands. So when the
11 Project was constructed and approved in 1905, the need
12 to use groundwater wells was, of course, not as --
13 basically wasn't necessary anymore because of the
14 reliable supply that was supplied through the Elephant
15 Butte storage, and so up until this report, most of
16 the studies that had been done since the beginning of
17 the Project had been on how to relieve these lands of
18 the groundwater and how to prevent waterlogging. So
19 that's what this is referring to. It's saying
20 basically, you know, we've got a balance down there,
21 and nothing is being waterlogged, and we don't really
22 have any other data beyond that.

23 **MS. ATTON:** Your Honor, I move to admit
24 Stevens Demonstrative No. 10 into evidence.

25 **MR. HOFFMAN:** No objection.

1 **JUDGE MELLOY:** Demonstrative No. 10 is
2 admitted.

3 **Q.** (BY MS. ATTON) Let's look at another passage
4 in the report. That's Part 1, Section 4. If we could
5 bring up Page 105 and enlarge the title here. So
6 briefly just to orient us, Dr. Stevens, what is
7 described in this section of the report?

8 **A.** This is a section of the report that relates
9 to water uses and the requirements for water.

10 **Q.** Let's look at a passage on Page 122. Now, on
11 the right-hand side, we have a passage here with the
12 title, "Uses and Requirements Other Than Those for
13 Irrigation." And, again, because this document is
14 unfortunately a little harder to read, we have
15 Demonstrative No. 11, which provides a type out. Now,
16 what is being reported in this section of the Joint
17 Investigation Report?

18 **A.** This is a brief discussion of the requirement
19 for water, the water requirements of towns and
20 villages, and it notes here that those types of uses
21 are, quote unquote, but a small fraction of the
22 irrigation use, and then at the bottom, it
23 says, "Under use by cities, towns, and villages," it
24 says, "As a general average, it has been observed that
25 the water requirement of cities and towns corresponds

1 closely to the irrigation requirement of agricultural
2 lands of equivalent area."

3 **MS. ATTON:** Your Honor, I move to admit
4 Stevens Demonstrative No. 11 into evidence.

5 **JUDGE MELLOY:** Any objection?
6 Demonstrative No. 11 is admitted.

7 **Q. (BY MS. ATTON)** Now, we also have
8 demonstrative covering the passage on the next page of
9 the report, Demonstrative No. 12. Now, this is, I
10 think, just a few paragraphs or sentences beyond the
11 section that we just looked at. What is being
12 reported here and why is that significant?

13 **A.** So this is reporting that the water that is
14 consumed by towns and -- and villages and cities also
15 provides return flows so it says here, "While the
16 supply for cities and towns is here treated as a
17 consumptive use, it is to be observed that the sewage,
18 whether raw, treated, or spread by broad irrigation,
19 becomes return water as effectively as the return from
20 irrigation. The aggregate amount probably varies
21 between 60 and 75 percent of the city supply and is,
22 therefore, relatively greater than return from the
23 irrigation."

24 **MS. ATTON:** Just so the record is clear,
25 as stated on this Demonstrative No. 12, this is from

1 Page 123 of the Joint Investigation Report. Your
2 Honor, I move to admit Demonstrative No. 12 into
3 evidence.

4 **MR. HOFFMAN:** No objection.

5 **JUDGE MELLOY:** No. 12 is admitted.

6 **Q. (BY MS. ATTON) Let's look at another passage**
7 **on the same page, 123, that is in your Demonstrative**
8 **No. 13. What is reported in this section here, and**
9 **why is it noteworthy?**

10 A. This section specifically discusses the
11 amount of water being used by El Paso and the -- the
12 origination of that water supply, and I'll just read
13 it here into the record. It says, "The water supply
14 for El Paso, with a population of 110,000 is obtained
15 from ten wells ranging in depth from 650 to 850 feet.
16 In 1936, the average daily draft during June, the
17 maximum month, was 11.7 million gallons, and during
18 December, the minimum month, 5.5 million gallons. In
19 addition to the municipal wells, there are many wells
20 owned and operated by private industries and others.
21 A 1936 survey by the city waterworks indicated an
22 annual production by these wells of about 5,600
23 acre-feet with a maximum daily draft during summer
24 months of 7.5 million gallons and a minimum in winter
25 months of 3.5 million gallons."

1 Q. And El Paso, just for the record, is in
2 Texas; is that right?

3 A. That's right.

4 Q. So just continuing this same discussion in
5 the Rio Grande report, we have Demonstrative No. 14.
6 This is just a little bit later on. I think it --
7 yes, it immediately follows because if you can see the
8 callout, I think, on the left-hand side of this
9 demonstrative, we're continuing the passage here, but
10 it's typed out so it's easier to read.

11 A. Yes.

12 Q. Now, briefly, what is reported here on
13 Demonstrative 14?

14 A. So, again, this is another example of where
15 we find reference to the future of -- of water use and
16 needs in the basin, and this is specific to the future
17 water supply for El Paso, and it says -- it's a quote
18 from a letter from January 12th, 1937, that was
19 written by the superintendent of El Paso's waterworks
20 to the engineer in charge of the Rio Grande Joint
21 Investigation, and that letter stated, "We are
22 contemplating the drilling and construction of three
23 additional wells within the very near future. The
24 records which this department has maintained over a
25 period of years indicate that the static level of our

1 groundwater supply is slowly receding. This, of
2 course, can mean but one thing; that is, the pumpage
3 in this area exceeds the recharge. Should the static
4 level continue to drop, we shall find it necessary to
5 seek another source of supply. Of course, there is
6 but one other source of supply available, and that is
7 the Rio Grande. However, we do not think that it will
8 be necessary for us to use water from that source for
9 several years, if at all."

10 **MS. ATTON:** Your Honor, I move to admit
11 Stevens Demonstratives No. 13 and 14 into the record.

12 **JUDGE MELLOY:** Any objection?

13 **MR. HOFFMAN:** No objection, Your Honor.

14 **JUDGE MELLOY:** Ms. Atton, are you about
15 to move onto a different topic now?

16 **MS. ATTON:** You read my mind. I was.

17 **JUDGE MELLOY:** All right. I think this
18 would be a good point then to take our evening break.
19 One point I did want to bring up, both
20 Dr. Miltenberger and Dr. Stevens have testified about
21 the letters of 1906 to 1908 where the United States
22 appropriated all of the unappropriated water. As I
23 saw on the tour and as we discussed a couple other
24 times, there are some claimants to water that predate
25 1906, and they are being supplied with water, as I

1 understand it, but it's also my understanding for
2 purposes of this litigation, we can ignore those
3 pre-1906 claimants that -- that it's such a de minimus
4 amount that no one's really wants to argue about it,
5 so to speak? Am I correct in my understanding?

6 **MR. HOFFMAN:** I think you're correct,
7 Your Honor. I believe that those rights are satisfied
8 from the Bonita ditch just below the Caballo Dam.

9 **JUDGE MELLOY:** That's my understanding,
10 as well, and we saw that ditch on the tour.

11 **MS. ATTON:** So, Your Honor, if I may, I
12 would like to consult with the team to make sure I
13 don't misspeak in answer to your question, so if I
14 may, if we could hold that over to tomorrow morning,
15 and I will give you an answer first thing?

16 **JUDGE MELLOY:** That's fine.

17 **MR. HOFFMAN:** Your Honor, if I misspoke,
18 my team will tell me, and I'll tell you tomorrow
19 morning, too.

20 **MS. COLEMAN:** And my team will tell me
21 if I don't see the Project was adjudicated in 1903
22 priority in state court.

23 **JUDGE MELLOY:** Yeah, I know the United
24 States doesn't agree with that prior adjudication so
25 that's -- so -- my also understanding --

1 **MS. COLEMAN:** That one we like.

2 **JUDGE MELLOY:** All right.

3 **MS. COLEMAN:** Your Honor, I do need to
4 raise one other thing, if I may, not rel -- well, in a
5 way related to this. A security concern that I've
6 been asked to address, which is that over -- over the
7 weekend, the four DOJ lawyers and one of our
8 paralegals and some -- and the attorney general
9 received some harassing e-mails from an individual who
10 we haven't heard of before and --

11 **JUDGE MELLOY:** Excuse me. Have heard of
12 before?

13 **MS. COLEMAN:** We have not. Have not.
14 And so we have forwarded those along to the justice
15 security people, and then separately, one of the
16 attorneys on our team has gotten several threatening
17 and intimidating letters from someone who is known to
18 most of the people on this Zoom and part of the
19 adjudication, and that has also been forwarded along,
20 and, also, there are harassing comments about -- about
21 counsel for the State of New Mexico in there, as well,
22 so we can inform counsel about that, but we just
23 wanted to raise that with the Court for your reference
24 and can provide any information that you need.

25 **JUDGE MELLOY:** Well, I appreciate that.

1 Has anyone else received any communications? I have
2 not. The only communication we've received came a
3 year ago or something like that with kind of a -- an
4 irate phone call from one of the Boyd interests after
5 the recommendation to deny the motion for leave to
6 intervene. I can't even tell you at this point who it
7 was, but it was someone purported to be associated
8 with that particular group.

9 **MS. COLEMAN:** Ms. Barncastle just -- I'm
10 sorry. Excuse me.

11 **JUDGE MELLOY:** If you want to switch on,
12 Ms. Barncastle, go ahead.

13 **MS. BARNCASTLE:** Hi there.

14 **JUDGE MELLOY:** Go ahead.

15 **MS. BARNCASTLE:** So I have in the last
16 couple of weeks received a few harassing e-mails,
17 also, from an individual who I previously had a
18 restraining order against in the Lower Rio Grande
19 Adjudication, most likely the same person harassing
20 the United States counsel based on the e-mails that I
21 received and the language in those.

22 **JUDGE MELLOY:** Okay. Well, I certainly
23 think the United States took the right action to
24 report that to your security folks. If anyone else
25 gets those type of communications, don't hesitate to

1 contact either the marshal or your local law
2 enforcement. As I said, I haven't received anything
3 up to this point. Hopefully I won't, but if I do,
4 I'll certainly report it to the U.S. Marshal.
5 Anything else on that matter or anything else we need
6 to talk about? All right. If not, then we'll see
7 everyone in the morning. Thank you.

8 (The proceedings adjourned at 5:10 p.m.)
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CERTIFICATE

I, HEATHER L. GARZA, a Certified Shorthand Reporter in and for the State of Texas, do hereby certify that the facts as stated by me in the caption hereto are true; that the foregoing pages comprise a true, complete and correct transcript of the proceedings had at the time of the hearing.

I further certify that I am not, in any capacity, a regular employee of any of the parties in whose behalf this status hearing is taken, nor in the regular employ of any of the attorneys; and I certify that I am not interested in the cause, nor of kin or counsel to any of the parties.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, on this, the 8th day of December, 2021.



Heather L. Garza

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