

SUPREME COURT OF THE UNITED STATES
NO. 141, ORIGINAL

STATE OF TEXAS,)
)
 Plaintiff,)
)
 VS.) VOLUME X
)
 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 20, 2021, commencing at 11:04 a.m.;

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1 **JUDGE MELLOY:** Good morning, everyone.
2 I had a few technical problems there. I'm sorry for
3 starting a little late. This, again, is, of course,
4 in the Texas versus United States, New Mexico, and
5 Colorado. Let me ask to -- for the parties to enter
6 their appearance again. For the State of Texas?

7 **MR. HOFFMAN:** I was muted. For the
8 State of Texas, Robert Hoffman, Your Honor.

9 **JUDGE MELLOY:** For Colorado? Excuse me.
10 For New Mexico?

11 **MS. ATTON:** Your Honor, Corinne Atton
12 for the State of New Mexico.

13 **JUDGE MELLOY:** And for United States?

14 **MS. COLEMAN:** Good morning, Your Honor.
15 Judith Coleman for the United States.

16 **JUDGE MELLOY:** And Colorado?

17 **MR. WALLACE:** Good morning, Your Honor.
18 This is Chad Wallace for the State of Colorado.

19 **JUDGE MELLOY:** All right. Well,
20 yesterday, we had this issue about exhibits, but I'm
21 going to hold off on that. I'd like to continue with
22 the cross-examinations and try to get as much of that
23 done today as we possibly can. I was reminded,
24 however, that, Ms. Atton, you had moved the admission
25 of Stevens Demos No. 13 and 14, to which there was no

1 objection, but I failed to formally admit them so
2 those are admitted into evidence. One other point,
3 Texas submitted a replacement of Texas Exhibit 696,
4 and we need to take a look at that a little more
5 closely. It's certainly a more legible copy, but I'm
6 not sure it's exactly the same as the 696 that was
7 originally admitted, so I'd ask -- I'd ask Texas and
8 the parties to take a look at that to make sure that
9 that is an exact duplicate of what was admitted into
10 evidence, other than in a more legible form. So with
11 that, is there anything we need to talk about before
12 we proceed with Dr. Stevens' examination? If not then
13 -- go ahead.

14 **MS. ATTON:** Sorry, Your Honor. So there
15 was a question you asked yesterday about pre-1906
16 rights.

17 **JUDGE MELLOY:** Oh, yes. Any -- any
18 further thoughts on that issue?

19 **MS. ATTON:** So, yes, Your Honor. As
20 background to your question on pre-project rights in
21 New Mexico, there are three active pre-project water
22 rights below Caballo, the Bonita Lateral, which you
23 saw, which serves approximately 200 acres. Below that
24 is a Holguin right, which serves approximately 90
25 acres through a river pump, and Horner right, which

1 serves approximately 23.5 acres through a river pump.
2 All told, these rights serve approximately 315 acres
3 of which approximately 115 acres take water below the
4 Caballo gage. New Mexico office of the state engineer
5 data shows that these rights divert approximately
6 1,200 acre-feet per year. Now, these pre-project
7 rights are important and are being adjudicated in the
8 New Mexico adjudication, but we do recognize that the
9 amounts of water are relatively small. New Mexico is
10 not aware of any claims about these water rights being
11 raised in this case, and we do not think they will
12 make an appreciable difference to the outcome.
13 Nonetheless, we do think recognizing those rights is
14 important and provides context for Project operations
15 that is helpful to understanding the issues in this
16 case. New Mexico believes the Compact protects those
17 rights by virtue of its intention to continue normal
18 operations of the Project.

19 **MR. SOMACH:** Your Honor, this is Stuart
20 Somach. May I be heard?

21 **JUDGE MELLOY:** You may.

22 **MR. SOMACH:** Yes. I saw the transcript.
23 Unfortunately, I was pulled away yesterday. I saw
24 most of yesterday, but at the end, I -- I had to
25 leave. I would like to have an opportunity to address

1 this a bit maybe in a day or so. This is an issue.
2 It has been an issue particularly with respect to the
3 Bonita Lateral. I need to get direction from my
4 client, however, about this. Our general view had
5 been consistent with Hinderlider that what New Mexico
6 decides to do and how it decides to address claims on
7 Rio Grande water under its apportionments in New
8 Mexico was up to New Mexico, but that that should have
9 no effect upon Texas, in the same way any preexisting
10 rights in Texas would be dealt with by Texas and --
11 and not involve New Mexico. We believe the Compact
12 provides an absolute priority for Compact water,
13 notwithstanding any preexisting uses of that water in
14 New Mexico or, quite frankly, in Texas. Some Compacts
15 do have preservation for prior existing rights. On
16 the Colorado River, there are considerable prior, I
17 think they call them prior vested rights, and -- but
18 this Compact doesn't provide for that. But if I
19 could, I'd like to at least get some further direction
20 from my client on how to handle this, but I didn't
21 want it to be gone with silence somehow being
22 acquiescence.

23 **JUDGE MELLOY:** Well, I didn't mean to
24 stir up a hornet's nest about this issue. I thought
25 it was pretty much a nonissue, but since it does

1 appear to be something that you may need some further
2 discussion on, let's put that on the back burner for
3 now, and we'll proceed with the testimony. We'll take
4 it up at a later time.

5 **MR. SOMACH:** Thank you, Your Honor.

6 **JUDGE MELLOY:** Thank you, Mr. Somach.

7 Dr. Stevens, we're going to continue
8 with the examination this morning. I do need to
9 remind you you're still under oath, and the same
10 admonitions I mentioned yesterday apply today.

11 You may proceed, Ms. Atton.

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

13 JENNIFER STEVENS,
14 having been previously duly sworn, testified further
15 as follows:

16 FURTHER DIRECT EXAMINATION

17 BY MS. ATTON:

18 **Q. Good morning, Dr. Stevens.**

19 A. Good morning.

20 **Q. Let's take a look at the 1938 downstream**
21 **contract, and that's Exhibit JT 0426. Dr. Stevens,**
22 **what was the context to the 1938 downstream contract?**

23 A. So this contract was intended to identify and
24 sort of lock in the maximum amount of acreage that --
25 that the water could safely irrigate, and what this

1 did was it divided that acreage, which was 155,000
2 acres, between the farmers and the lands in New Mexico
3 and EBID and those downstream in Texas and EP1 in the
4 proportions of 57/43 or 88,000 acres and 67,000 acres
5 respectively.

6 **Q. Let's just enlarge the "therefore" clause in**
7 **the paragraph afterwards. And you've taken those**
8 **numbers from this passage you've seen enlarged on the**
9 **screen?**

10 A. Yes, that's right. In addition to those
11 numbers, there was an allowance for an increase of 3
12 percent or a cushion, if you will, for the farmers to
13 increase that acreage as they saw fit or as the
14 farmers needed to.

15 **Q. Now, this downstream contract is dated**
16 **February 16th, 1938, and that's very close to the date**
17 **when the 1938 Compact was signed; is that right?**

18 A. Yes, that's right. About five or six weeks,
19 yes, very close.

20 **Q. Let's look at another exhibit.**

21 **MS. ATTON:** Could you bring up New
22 Mexico 1419?

23 **Q. (BY MS. ATTON) What is this exhibit, Dr.**
24 **Stevens?**

25 A. This is a March 1938 letter from Frank

1 Clayton, the Texas Commissioner for the Rio Grande
2 Compact Commission to Mr. Robertson, and Mr. Robertson
3 was secretary of the Water Conservation Association
4 downstream of Fort Quitman, so he was representing the
5 water users in an area outside of the Compact area.

6 **Q. Can you give us some context to this letter?**

7 A. Yes. So the downstream users, and when I
8 saw "downstream," I mean downstream of Fort Quitman in
9 this case, were concerned about the fact that the
10 Compact did not provide for a specific amount or
11 specific volume of water to pass into Texas and,
12 therefore, downstream -- downstream to them, and so
13 after the parties signed the Compact, each of the
14 states had to ratify that Compact before it went to
15 Congress, and this was sort of some internal politics,
16 if you will. The people downstream from Fort Quitman
17 were very concerned about this lack of specificity
18 with regard to a volume of water passing the Texas
19 state line -- the Texas/New Mexico state line, and so
20 this was Clayton responding to some of those concerns
21 and explaining how the Compact came to be.

22 **MS. ATTON:** Can we please enlarge the
23 last paragraph on Page 2 of this exhibit. Page 2 of
24 the exhibit. Thank you.

25 **Q. (BY MS. ATTON) So there's a reference in this**

1 paragraph here to, "All diversions of water below
2 Elephant Butte and all releases from the reservoir
3 being under the control of the Bureau of Reclamation."

4 Do you see that?

5 A. I do see that, yes.

6 Q. What's the significance of that?

7 A. What Frank Clayton was explaining to the
8 downstream representative here was that the reason for
9 not specifying a volume of water passing the Texas/New
10 Mexico state line was because it wasn't -- that water
11 wasn't in control of either state. It was in control
12 of the Bureau of Reclamation, and so he was explaining
13 that and explaining why such a provision with regard
14 to specificity of volume was not present in the
15 Compact and explaining that the Project was to be
16 operated as a unit and that the Bureau of Reclamation
17 was in control of that water.

18 Q. Let's look at a passage on the next page,
19 that's Exhibit No. 3. Can you please enlarge the last
20 paragraph on the page, particularly the sentence
21 starting, "As a matter of fact"?

22 Okay. Do you see, Dr. Stevens, the first
23 full sentence here?

24 A. I do, yes.

25 Q. Now, Mr. Clayton says here that he feels that

1 under the Compact, Texas will receive, and I quote,
2 all the water she can reasonably expect. Do you see
3 that?

4 A. I do.

5 Q. What do you understand Mr. Clayton to mean by
6 this?

7 A. So as the record shows in this matter, there
8 had been some discussion about the amount that would
9 constitute the, quote, normal release, and Texas, as
10 we know, had been fighting for an 800,000 acre-foot
11 number; however, through the course of various
12 negotiations and the folks upstream of Elephant Butte
13 expressing some concern, the State of New Mexico and
14 Colorado and Texas had come to agree on the 790,000
15 acre-foot conclusion, and that was -- that amount of
16 water to be released from Elephant Butte was, in fact,
17 considered enough to handle Texas' salinity concerns,
18 and so together, all three states agreed on that, and
19 in this matter -- or in this letter, Clayton is saying
20 this is as much as Texas can expect to receive, and
21 we're happy with it. This is a good number for us.
22 It takes care of our concerns.

23 Q. Let's look at another exhibit.

24 MS. ATTON: Can you bring up New Mexico
25 0445?

1 Q. (BY MS. ATTON) Now, we have a letter here
2 dated September 29, 1938, from Sawnie Smith to
3 Mr. Frank Clayton. I think this is one of the
4 exhibits that we saw yesterday.

5 A. Yes.

6 Q. Do you recognize this exhibit, Dr. Stevens?

7 A. I do.

8 Q. Let's step through this letter paragraph by
9 paragraph, if we may. Let's start with the first
10 paragraph. Now, what does Mr. Smith say in this first
11 paragraph?

12 A. So Mr. Smith, who represents the water --
13 another set of water users downstream of Fort Quitman
14 is writing, again with similar concerns to
15 Mr. Clayton, and he is concerned, also, about the
16 amount of water that has not been specified in the
17 Compact to come across the Texas border, and in
18 addition to that, and I failed to sort of make this
19 connection a minute ago, these folks were making --
20 I'm not sure how overt they were, but there was
21 certainly concern that the downstream folks might fold
22 up ratification in the Texas legislature, so Sawnie
23 Smith, representing some of those folks, is writing to
24 Clayton and asking why some of these things are not
25 present in the Compact, and in this first paragraph,

1 he specifies the fact that there had been no
2 provision, quote, for the division of waters below
3 Elephant Butte between New Mexico and Texas and no
4 provision made concerning the amount of water to which
5 Texas is entitled. And, again, this is about the
6 volume of water.

7 **Q. Let's take a look at the next paragraph.**
8 **Now, Mr. Smith sets out certain of his understandings**
9 **in this paragraph. What were his understandings as he**
10 **reports in this paragraph of his letter?**

11 A. So Smith here is explaining his understanding
12 that relates to the -- the contract, the downstream
13 contract, that we just talked about a minute ago, and
14 he says here that the Project is established and its
15 water is basically divided, and he says 60 percent, 40
16 percent. We know it's 57/43, but he's sort of
17 rounding up and down. And he says that if those
18 understandings are correct, the division of the waters
19 would be in proportions of the Rio Grande Project in
20 the said two states. So he's explaining his
21 understanding of what the Compact has laid out.

22 **Q. Let's look at the next paragraph. Now, here**
23 **in this paragraph, Mr. Smith expresses some concern as**
24 **to a future controversy, and he says here that he did**
25 **not find anything in the Compact which ties down and**

1 limits the use or division of the waters according to
2 present usage of physical conditions. Do you see
3 that?

4 A. I do.

5 Q. What do you understand Mr. Smith to be saying
6 here?

7 A. Well, I think he's expressing a concern
8 that there is nothing in the Compact that limits the
9 uses downstream of the dam, and he's -- he's
10 expressing concern, perhaps he's prescient here that
11 there was nothing in that Compact that would prevent a
12 controversy between the two states because of that
13 absence.

14 Q. Let's look at the last paragraph of his
15 letter. Now, this is the concluding paragraph of
16 Mr. Smith's letter. What does he request of
17 Mr. Clayton?

18 A. He asks for a response. He says the omission
19 that he has been referring to is, quote, too obvious
20 to have been inadvertent and so he says that the
21 commissioners clearly had a valid reason for it and
22 essentially, please tell us what that valid reason
23 was, so he asked Clayton to respond so he can get back
24 to his clients.

25 MS. ATTON: Let's look at the next

1 exhibit, New Mexico 2119.

2 Q. (BY MS. ATTON) So this is an October 4th,
3 1938, letter from Mr. Clayton back to Mr. Smith, and I
4 believe it's his response letter; is that correct?

5 A. Yes. That's right.

6 Q. And this is, for the record, a letter that
7 Dr. Miltenberger also directed the Court to yesterday.
8 So let's look at what Mr. Clayton says in response to
9 Mr. Smith's letter that we just looked at. Let's
10 enlarge the first paragraph. Now, what does
11 Mr. Clayton tell Mr. Smith in this paragraph?

12 A. So he explains that the lack of a state line
13 delivery had been determined a long time ago. He said
14 that -- in the middle of the paragraph here, he
15 explains that prior to the signing of the 1929
16 temporary Compact, that New Mexico's obligations were
17 to deliver into Elephant Butte, and the reason for
18 that were because the state line was always changing,
19 the delivery points went back and forth across the
20 state lines, so it was just very difficult to make
21 that sort of a distinction, and so he explains why the
22 decision was made to make New Mexico's obligations
23 into Elephant Butte and not at a state line.

24 Q. Let's look at the next paragraph. What
25 responses does Mr. Clayton give Mr. Smith in this

1 **paragraph?**

2 A. He explains in this paragraph that the
3 releases and the delivery of water from Elephant Butte
4 are in the hands of the Bureau of Reclamation. He
5 says that they're in control of these waters, that at
6 least until the government is, quote, repaid its
7 investment and probably beyond that time, the states
8 themselves have no control over how this water is
9 managed or delivered, and so this is really -- it's
10 not possible to expect any particular fixed delivery
11 to Texas when the dam itself and those deliveries are
12 not in the hands of either of those states.

13 **Q. Let's now look at the last paragraph of Page**
14 **1 of the exhibit and the continuation of that**
15 **paragraph at the top of Page 2. Now, in this section,**
16 **Mr. Clayton responds to Mr. Smith's questions**
17 **regarding the decision of project water. What**
18 **clarifications does he give?**

19 A. So he explains here that the contracts we
20 discussed a moment ago regarding the 57/43 split is
21 how that water is divided and that even though the
22 states don't have control of the deliveries and don't
23 have control of the operations, that they do have this
24 contract that guides and determines how that water is
25 delivered and what proportions, and that's what he's

1 describing here. And, again, he repeats the figures
2 that I mentioned a moment ago, the 88,000 acres for
3 Elephant Butte Irrigation District in New Mexico and
4 67,000 acres -- I'm sorry, not acre-feet, acres for
5 the El Paso County Water Improvement District.

6 **Q. And that 88,000 to 67,000 is the 57 percent**
7 **to EBID, New Mexico, and 54 percent -- sorry -- 57**
8 **percent and then 43 percent division to EPCWID in**
9 **Texas; is that right?**

10 A. That's right. Those are the proportions or
11 the percentages of the total of 155,000 acres.

12 **Q. And Mr. Clayton uses the term, and he quotes**
13 **it, frozen, in this paragraph. What's the**
14 **significance of that?**

15 A. So this is the only thing that I see in the
16 entire historical record that is actually frozen,
17 which is that 155,000 acres plus the 3 percent
18 cushion. It's the only place in the record that I see
19 the term frozen, and it's the only thing in the record
20 that -- that is frozen during all of these
21 negotiations and during all of the communications and
22 the formal official documents that relate to the
23 signing of this Compact.

24 **MS. ATTON:** Please can you enlarge the
25 third paragraph on this page? Starts, "The

1 arrangement just..."

2 **Q. (BY MS. ATTON) What explanation does**
3 **Mr. Clayton give in this passage?**

4 A. He explains here why that contract and the
5 numbers in it were not included in the Compact itself,
6 and he explains that this is a contract between
7 private parties, the two districts, and he says that
8 it was that reason that nobody felt that it was
9 desirable to actually put those terms into the Compact
10 itself.

11 **Q. So Dr. Miltenberger, yesterday, referred to a**
12 **1938 condition, and he offered the opinion, I believe,**
13 **that any depletions occurring within the Project are**
14 **frozen as of 1938. Do you agree with this opinion,**
15 **and, please, can you explain your response?**

16 A. I don't agree with that opinion. Sawnie
17 Smith is the one who wrote to Mr. Clayton and said, "I
18 see nothing in this Compact that ties down the uses,"
19 and Clayton, in his response, which is up on the
20 screen, never dispels that notion. He never says that
21 depletions are frozen. He only says that the acreage
22 under the Project is frozen at 155,000 acres. If you
23 look at the entirety of the historical record, there's
24 no question that the Bureau of Reclamation's whole --
25 the whole reason behind its existence is to increase

1 settlement and to grow the west. So it's unlikely, in
2 my mind, that any -- any of the three states would
3 have intended to limit that growth, and certainly the
4 Bureau of Reclamation, to have done so and to have
5 limited depletions and limited growth on the Project
6 would have been contrary to its purpose, to its
7 existence at all. And I think it's -- it's very clear
8 from a historical record, and we talked about some of
9 this yesterday, that the entire discussion leading up
10 to the Compact was not just about present uses and it
11 said over and over and over in the Rio Grande Joint
12 Investigation Report, but also to accommodate and
13 examine the need for the future, both population
14 growth, changes in crops, changes in the water system
15 itself, including things like rectification, which we
16 talked about, potential upstream storage, et cetera.
17 So as far as I read the historical record, and I look
18 at the entire context of all the things that went into
19 it, it's very clear to me that this is a
20 forward-looking document, not a document intended to
21 freeze anything in time except for that acreage
22 number.

23 **Q. From your review of the contemporaneous**
24 **historical record, have you seen any discussion of any**
25 **state wanting Project operations frozen in 1938?**

1 A. No.

2 Q. Now, before we move on, Dr. Miltenberger
3 yesterday identified a few documents dated 1968, when
4 he was offering opinions as to what the authors of
5 those documents understood 30 years earlier. From the
6 perspective of an expert historian, what's your
7 response to that testimony?

8 A. So my methodological approach is to look at
9 everything in the record that is relevant. Certainly
10 the 1968 documents are worth looking at and important
11 to view, but my method and my approach to any
12 historical research that I do is to rely most heavily
13 on materials that come from the time period that I'm
14 studying, and the further away I get from that time
15 period, the less reliable I find the responses to be
16 or the records to be. I'm sure that anybody trained
17 in history knows there's actually an entire area of
18 history called the history of memory, believe it or
19 not, and believe me, I'm not an expert in it, but
20 there's a question as to how good people's memories
21 are as time goes on, so while 1968 is certainly not
22 out of the realm of discussion for understanding this
23 Compact, particularly as it relates to the actions of
24 the parties involved, somebody's recollection 30 years
25 later isn't as reliable a document to me in my view,

1 in my, you know, ascertaining the body of historical
2 evidence as the materials from the immediate time
3 right around the Compact. So I have no problem using
4 1968 documents at all. In fact, I think that they
5 could be important, but in my mind, anybody writing in
6 1968 has accumulated a lot of additional knowledge
7 since the time in this particular matter of the
8 Compact being signed, which was 30 years earlier, and
9 it's hard to separate out that new knowledge that you
10 gain in that interim period from what you knew back in
11 1938. So, again, I don't find it unreliable. I just
12 think you have to sort of look at it and understand
13 the context of it and then weigh it against the
14 documentation of the time period you're actually
15 studying.

16 **Q. Now, one of the documents Dr. Miltenberger**
17 **directed the Court to was a 1968 document by Reynolds.**
18 **Do you recall that?**

19 A. I do.

20 **Q. In that 1968 document, if you recall, there**
21 **was some discussion as to understandings related to**
22 **groundwater?**

23 A. Yes.

24 **Q. Do you have a response to the use of that**
25 **document to inform understandings in 1938,**

1 specifically with reference to the issue of
2 groundwater?

3 A. Well, Steve Reynolds was not part of the
4 negotiations and was not present during the
5 negotiations for the Compact. He was not made state
6 engineer in New Mexico, I don't believe, until 1955,
7 so, again, it's one of those documents that I think is
8 important to look at perhaps. I don't really know the
9 context within which Steve Reynolds gave that speech
10 or why he was giving it, so I would need to know those
11 sorts of things before I offer opinions on it, but as
12 a general matter, because he was not a party to the
13 Compact negotiations and doesn't really enter the
14 scene until much later, I, again, sort of take that as
15 one piece of the puzzle but perhaps not the most
16 significant piece of the puzzle to answer the
17 questions that I was asked to answer.

18 MS. ATTON: Let's bring up Stevens
19 Demonstrative No. 3.

20 Q. (BY MS. ATTON) Now, Dr. Stevens, on this
21 demonstrative, you've summarized some of your opinions
22 concerning the Project in the 1938 Compact. Based on
23 your review of the historical record, can you please
24 explain each of these opinions?

25 A. Yes. So the first opinion on the slide is

1 that the Project was always operated as a single unit,
2 and that seems clear from -- from the record, that the
3 Bureau of Reclamation was in charge of the Project and
4 that it was intended to be operated that way and that
5 the second point here, each acre was figured to
6 receive the same amount of water. So when they did
7 their annual allocations each year, they figured that
8 water on the same amount per acre for the entire
9 project. The third point here relates to that
10 downstream contract and the fact that the parties
11 agreed amongst themselves that of the 155,000 acres
12 within the Project area, which was considered the safe
13 -- the safe amount to irrigate with the water supply,
14 that 57 percent of those acres were in New Mexico, and
15 43 percent of those were in Texas. This next point is
16 very important, not more important, not less
17 important, but very important, and that is that the
18 Project was always intended to be flexible. I have
19 studied many irrigation Reclamation projects in the
20 west, and I have never seen a single project that is,
21 you know, limited in time and isn't expected to change
22 and grow over time, and so I -- I believe strongly and
23 the historical record demonstrates that the Rio Grande
24 Project was intended to be flexible, that it was
25 intended to adapt to changing needs, changing crops,

1 changing technology and many other developments that
2 perhaps I'm not listing here, and then the final thing
3 is that the states -- all three states intended the
4 1938 Compact to protect that project and to protect
5 the existing rights under that project, and New Mexico
6 intended the project to be the protection for its
7 downstream water users and that's an important point
8 to make.

9 **MS. ATTON:** Your Honor, I move to admit
10 Demonstrative No. 3 into evidence.

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

12 **JUDGE MELLOY:** No. 3 is admitted into
13 evidence.

14 **Q. (BY MS. ATTON)** I'd like to now turn to
15 groundwater. Now, Dr. Miltenberger briefly identified
16 a number of groundwater reports yesterday, and I'd
17 like to bring these up on the screen and ask you about
18 them. Let's start with the Vernon report of 1903,
19 which is Joint Exhibit 0446. Dr. Stevens, what is
20 this report?

21 **A.** This was a report done in 1903 by the
22 agricultural experiment station of the New Mexico
23 College of Agriculture and Mechanic Arts, which we
24 know now today as New Mexico State University, and
25 this was a study done by John Vernon and Francis

1 Lester that was examining the ability or the potential
2 to pump water from wells in the Mesilla Valley for
3 irrigation purposes for crops.

4 **Q. What were the key findings of this study?**

5 A. Well, it was good news for farmers. They
6 essentially found that there was a -- I think the term
7 they used was inexhaustible supply of underground
8 water lined beneath the acreage in the Mesilla Valley.
9 So it was a positive finding for the farmers. It was
10 encouraging them to use pumping in the case of erratic
11 flows or dried-up flows of the surface water of the
12 Rio Grande, and, of course, this predated the project
13 being built so at the time, this was considered good
14 news because the farmers could rely upon, again, what
15 they thought was an inexhaustible supply of
16 underground water.

17 **Q. Let's look at Page 8 of this exhibit.**

18 **MS. ATTON:** If you could please enlarge
19 the title summary and the first paragraph below it.

20 **Q. (BY MS. ATTON) We've highlighted it here on**
21 **the screen. What is the significance of this finding**
22 **that is highlighted here?**

23 A. So, again, what this essentially says is that
24 there's an ample quality of water, and importantly,
25 that it's in a comparatively shallow depth, which

1 means this is an accessible supply of water for the
2 farmers in the area.

3 **Q. Let's turn to Page 13. And if you could**
4 **please enlarge the last paragraph on that page.**

5 **Now, what is reported in this passage?**

6 A. So, again, this is a passage related -- or
7 the whole report is related to southern New Mexico and
8 the Mesilla Valley, and it says here that the whole
9 valley appears to have water underneath it. They
10 didn't know at the time the specifics of this water,
11 whether -- and he says here whether it's an immense
12 reservoir or river flowing, but he says that the
13 amount is enormous and that it's amply sufficient to
14 meet all reasonable needs, and then he says that a
15 sufficient quantity of water exists under every acre
16 of irrigable land in the valley. So they didn't
17 believe that the supply would cease to exist, which it
18 says at the very end here. They thought that the
19 supply was enormous, and they thought that it was
20 close enough to the surface to be reasonably drawn up
21 and used on the fields to crop.

22 **MS. ATTON:** Let's turn to Page 58. And
23 if you could enlarge the sentence that starts above
24 the image, starts with, "in the pumping of water." My
25 apologies. It starts "water throughout the valley."

1 That's correct. And if you could -- exactly. Thank
2 you. Enlarge the continuation of this passage below
3 the image.

4 **Q. (BY MS. ATTON) Now, this is a passage a**
5 **little later in the same report. What is reported**
6 **here?**

7 A. So it's reiterating the amount of water, and
8 it's also specifying exactly how deep that water is
9 and the water table they described here is between 15
10 and 20 feet beneath the surface and, again, this is
11 where they actually say inexhaustible supply of water.
12 They also continue that the water is of good quality
13 and that it's so short a distance beneath the surface
14 of the -- of the ground that it can be raised up and
15 used for irrigation.

16 **Q. Now, Vernon doesn't just talk about New**
17 **Mexico in this report, does he? He also discusses El**
18 **Paso?**

19 A. That's correct, yes.

20 **Q. But let's first just go back a few pages to**
21 **Page 54 of the same report.**

22 **MS. ATTON:** And if you could enlarge --
23 yes -- the first paragraph here under the
24 heading, "Pumping Plants in New Mexico."

25 **Q. (BY MS. ATTON) What is described in this**

1 **section of the Vernon report?**

2 A. So Vernon here is describing the fact that in
3 New Mexico, pumping is still a relatively new
4 phenomenon, but he points out and he points to El Paso
5 as -- as a sort of place to look for experience and an
6 example of how they're using the groundwater there.
7 And he says here that -- that in 1900, when they took
8 a census, that only about a thousand acres of land in
9 New Mexico were irrigated from wells but that in El
10 Paso -- well, actually, don't get to the El Paso part
11 here. We'll get to that in a minute, but that was
12 compared to about 200,000 acres, which were irrigated
13 from the streams in New Mexico. So New Mexico itself
14 was still a little behind the times at this point as
15 compared to El Paso, which I think is coming up in the
16 next section.

17 **Q. So let's look at Page 55.**

18 **MS. ATTON:** And if you could enlarge the
19 first paragraph on that page.

20 **Q. (BY MS. ATTON) What does Vernon report here?**

21 A. So first, he orients the reader to the
22 location of El Paso, which is about 30 miles down the
23 stream, and he says that the conditions there are very
24 similar to the ones that he is describing in the New
25 Mexico part of the Mesilla Valley, and he says here

1 that the experience of the farmers in the El Paso area
2 is worthwhile and important to look at. He says here
3 that through a constant failure of the regular supply
4 of the irrigating water from the Rio Grande, the
5 farmers there have had to turn their attention to
6 wells and that they had to do that, otherwise, they
7 were going to have to abandon all possibilities of
8 farming and doing agricultural work.

9 **MS. ATTON:** Let's look at another
10 exhibit. Can we bring up JT 0430?

11 **Q. (BY MS. ATTON) Dr. Stevens, do you recognize**
12 **this exhibit?**

13 A. I do.

14 **Q. Can you describe what it is and very briefly**
15 **what it -- what is described in it?**

16 A. Sure. So it was written in 1919, and this
17 is, again, the time that the drainage was being
18 constructed on the Project, and, again, because the
19 Project was sort of continued to evolve over time,
20 this is a report that was looking at the possibility
21 of constructing a high line canal, which ultimately
22 was not done, and, in fact, this report recommends
23 against it. It was also looking at the potential of
24 developing power at the Elephant Butte Dam and then,
25 finally, of supplying water for the City of El Paso

1 from the Elephant Butte Dam. And it was written, I
2 should say, by the Bureau of Reclamation's Board of
3 Engineers.

4 **Q. Just stepping back a little bit and thinking**
5 **about what was happening in 1919, can you explain to**
6 **the Court what was happening, you know, on the Project**
7 **area more generally at this time?**

8 A. Yes. So by now, the delivery of storage
9 water had commenced. It had begun in 1915 and then,
10 of course, the dam was completed in 1916. So the
11 Project was really beginning to mature, and, of
12 course, as I mentioned, there was a problem of
13 waterlogging and so drainage construction had also
14 begun at the time. So the Project was still -- you
15 know, it wasn't brand new, but it was still evolving
16 and maturing at this time, and they were still trying
17 to figure out as electric power became a potential for
18 creation on hydro -- on dams, they were looking at
19 that sort of thing, that that was sort of a new thing
20 at this point. So the Project was evolving, and they
21 were looking at different ways that they could
22 actually use the Project for new and different
23 reasons.

24 **Q. So let's look at some of the conclusions that**
25 **were made in this report.**

1 **MS. ATTON:** If we could turn to Page --
2 we're looking at Paragraph No. 109, which I think
3 starts on Page 48 and crosses over to Page 49. If you
4 could enlarge that Paragraph 109 for us completely.

5 **Q. (BY MS. ATTON) Dr. Stevens, what is reported**
6 **in this Paragraph 109?**

7 A. So as I mentioned, this report was related
8 specifically to three issues, and the -- the high line
9 canal, the power, and then the use of storage water
10 for the city of El Paso. This particular paragraph is
11 related to a question about -- about power supply, and
12 its concern here or the concern it's addressing is
13 whether or not power supply might result in a shortage
14 of water sometimes and so it states here that the
15 users on the Project would be okay with having a
16 shortage of water because they could always look to
17 groundwater if they needed to, assuming that provided,
18 and it says this at the end of the paragraph, provided
19 that cheap power was obtainable. So they're looking
20 at that last sentence, there's a possibility that the
21 quality of groundwater may in time improve so that it
22 may be used to reduce the shortages as they occur
23 provided cheap power is obtainable. So what they're
24 saying here, and they're reiterating from what we know
25 from earlier in the Project, that around the turn of

1 the century, they looked at wells as a possibility for
2 supply, but that when the Project was constructed,
3 they -- you know, the promise of the Elephant Butte
4 Project and the Rio Grande Project was to provide a
5 reliable surface supply to the farmers. What this is
6 essentially saying in 1919 is that, you know, that
7 groundwater supply is still available in times of
8 shortage as a supplement in the event that, you know,
9 we create this power supply, and it messes with the
10 reliability of the surface water.

11 **MS. ATTON:** Your Honor, if you will
12 forgive me, we're having a slight technical issue with
13 Dr. Stevens' microphone. Could we just take one
14 minute just to make sure we fix that so it's clear for
15 everyone?

16 **JUDGE MELLOY:** All right. We'll take a
17 couple minutes.

18 (Recess.)

19 **MS. ATTON:** Your Honor, I think we're
20 fixed.

21 **JUDGE MELLOY:** All right. Let's go
22 ahead then.

23 **Q. (BY MS. ATTON)** Dr. Stevens, let's look at the
24 next chapter in your timeline.

25 **MS. ATTON:** If you could bring up

1 Stevens Demonstrative No. 15.

2 Q. (BY MS. ATTON) Please talk us through the
3 events and documents on this timeline.

4 A. So this timeline takes us from the signing of
5 the Compact through to 1963, and the first couple of
6 entries here are, again, sort of just intended to
7 demonstrate the continual changes that are occurring
8 in the system, in the Rio Grande system. So between
9 1936 and 1938, the Caballo Dam was constructed, and
10 that was a dam that was partially intended for storage
11 and also partially intended for flood control reasons.
12 The second thing you see here is what I've already
13 referred to a bit, which was the Rio Grande
14 rectification or what I've written here as the
15 canalization, and what that process was, was an effort
16 to make the management of the Rio Grande more
17 efficient by straightening out the channel, which it
18 did, making it more or less into a canal. In 1946,
19 things started to change rather dramatically. It was
20 that year that it became clear that there would be a
21 shortage of water and that they were entering into a
22 drought. So in 1946, the Elephant Butte Irrigation
23 District reached out to the U.S. Geological Survey and
24 asked to cooperatively sign the agreement where they
25 would study the groundwater in the Mesilla Valley in

1 New Mexico so that they could understand whether or
2 not that could be a supplemental supply for them in
3 times of shortage, and they were -- it was a -- it was
4 really an emergency. They were looking at a reservoir
5 that did not have enough water in it to supply them
6 with a full allotment and so they reached out to the
7 USGS very concerned that they didn't have the
8 information they needed about that groundwater supply,
9 in part because it hadn't really been studied up until
10 this point very much, and so they signed that
11 agreement and there ensued a study by the USGS
12 regarding groundwater, which we'll talk about. The
13 next several entries on the timeline in the upper part
14 represent a series of studies that came out beginning
15 with the results of the study I just mentioned with
16 EBID in 1947, so initially there was a preliminary
17 memo that was issued by the author of that study,
18 Conover, and then following that time, there were a
19 series of additional reports related to groundwater
20 and understanding of groundwater in the valley
21 downstream of Elephant Butte Dam that came out of
22 1954, 1961, and then finally, in 1963. And just along
23 the bottom here, I've put a placeholder to represent
24 the time period that that drought extended. So it was
25 more or less from the late 1940s until about 1957 that

1 that drought extended and continued.

2 **Q. Let's look at the 1947 Conover preliminary**
3 **memo. That's Joint Exhibit No. 444. Now, what is**
4 **this first page?**

5 A. This is the transmittal letter from C.V.
6 Theis, who we've mentioned in the last couple of days,
7 who oversaw Conover's work on this investigation. And
8 they call this the preliminary memo because, as I
9 mentioned, the Elephant Butte Irrigation District and
10 the farmers thereunder were quite concerned about the
11 lack of water in Elephant Butte Dam at this time, so
12 the folks at Elephant Butte Irrigation District really
13 were pushing for results from this study. They wanted
14 to make sure that the water was available and they
15 wanted to look at what would happen if they pumped
16 this groundwater on their lands and whether or not
17 that was an option for them so they pushed to get some
18 results from that in 1947, and this is the letter that
19 transmitted those results.

20 **Q. Let's look briefly at Page 2 of this exhibit.**
21 **I think this is where the preliminary memo starts; is**
22 **that right?**

23 A. Yes, that's correct.

24 **Q. It says here at the top, the author is Clyde**
25 **S. Conover?**

1 A. Yes. And it's dated September, 1947.

2 **MS. ATTON:** Let's enlarge the second
3 paragraph at the bottom of this page.

4 **Q. (BY MS. ATTON) What is reported here?**

5 A. So this is, again, sort of an introduction
6 and the reasons -- it's explaining the reasons for the
7 investigation, and it's explaining that the -- what
8 Conover and his colleagues looked at here was what
9 would happen if they pumped water for irrigation, what
10 was the productiveness of wells going to be, and
11 importantly -- and this is really the first time this
12 has been looked at -- what would the effect of that
13 pumping be on the surface water supply in the river
14 and the drains, and then it -- the last thing it says
15 here is that, again, this is urgent. They were
16 entering a drought, and EBID needed to know what the
17 -- what the preliminary results were so that they
18 could make a decision about whether or not to pump.

19 **Q. Are you aware of any investigation before**
20 **1947 that focused on the potential effect of pumping**
21 **on surface water supply?**

22 A. No study prior to this that quantified that
23 impact, no.

24 **MS. ATTON:** Let's turn to Page 10 and to
25 the last paragraph on that page, if you could enlarge

1 that.

2 **Q. (BY MS. ATTON) Now, what is reported here?**

3 A. So going back to the Vernon and Lester
4 report, after that time, several wells were dug, but
5 as I mentioned, once the Project went into effect,
6 those wells had ceased to -- the farmers ceased to use
7 those wells, so what Conover is describing here is
8 that in 1947, very few wells were operating in the
9 Mesilla Valley at the time in New Mexico and that,
10 although there had been several of them in the early
11 1900s once Elephant Butte Dam went in and there was a
12 reliable surface supply provided by the Project, those
13 wells had been abandoned. However, with the coming
14 drought and the concern over that, new irrigation
15 wells were being drilled and -- and that's the reason
16 that they needed to do this study, and he was
17 explaining sort of laying the groundwork for what was
18 actually going on, on the ground at the time.

19 **Q. Let's look at Page 22 of this exhibit.**

20 **MS. ATTON:** If you could enlarge the
21 first sentence of the first full paragraph. The
22 second paragraph on the page.

23 **Q. (BY MS. ATTON) Now, looking at this first**
24 **sentence here, what do you understand this sentence to**
25 **be saying?**

1 A. This is the first time in the literature, in
2 the historic literature, where there is actually
3 quantification of what's going to happen if
4 groundwater is pumped, and Conover states here that
5 the debt -- that's what he calls it, he calls it the
6 debt -- of groundwater can be repaid, i.e. by
7 recharging of the aquifer, in four years of average
8 water supply. So it basically is giving the farmers
9 in EBID a sense of what the results are going to be if
10 they pumped groundwater and how long it will take for
11 the surface water to replenish that supply in years of
12 normal supply. So it's really -- you know, it's the
13 first sort of number that's provided that will help
14 them understand that.

15 **Q. Now, when were Conover's findings published?**

16 A. Well, these were made available to the State
17 of New Mexico, but the U.S. Geological Survey didn't
18 publish this as a water supply paper until 1954.

19 **Q. Let's take a look at that report. It's New**
20 **Mexico 499. Do you recognize this exhibit?**

21 A. I do.

22 **Q. And what is it?**

23 A. This is Conover's findings several years
24 later being published by the U.S. Geological Survey.

25 **Q. Let's look at Page 7.**

1 **MS. ATTON:** If you could enlarge the
2 second paragraph on this page.

3 **Q. (BY MS. ATTON) What is reported in this**
4 **paragraph?**

5 A. As I mentioned, there was a coming drought,
6 and Elephant Butte, in 1946, had only a year's worth
7 of normal supply for the Project at that time, and so
8 Conover is explaining that it was due to that
9 provocation that -- that they were basically hired,
10 that Conover was hired by Elephant Butte Irrigation
11 District to come and do this study, so they signed a
12 cooperative agreement whereby the groundwater branch
13 of the survey would make the study that we are now
14 reading about. And he says specifically, I guess I
15 should point out in this last sentence, he says, "The
16 feasibility of using groundwater to supplement the
17 present supply of surface water for irrigation in the
18 district."

19 **Q. Let's look at Page 10.**

20 **MS. ATTON:** And if you could please
21 enlarge the second-to-last paragraph.

22 **Q. (BY MS. ATTON) What does Conover report here?**

23 A. So, again, he's going a little bit deeper
24 into the reason for the study, and he calls it the
25 impending shortage of water supply from Elephant Butte

1 Reservoir, and he says that one measure to relieve
2 that coming shortage was the possibility of
3 groundwater use, and he points out here that the
4 district itself wanted to intelligently plan that use
5 and that to intelligently plan that use, they needed
6 information. They needed to understand it. And as we
7 talked about yesterday, there had not been a study of
8 this in the Rio Grande Joint Investigation so there
9 really was a lack of information regarding groundwater
10 conditions in the Mesilla Valley in New Mexico and so
11 because of that -- because of that lack of
12 information, EBID really needed the study to be done
13 by USGS and so asked them to do that mainly again from
14 the standpoint of productiveness of wells and the
15 effect that that pumping would have on the surface
16 water supplies.

17 **Q. Let's look back at Page 8.**

18 **MS. ATTON:** And if you could enlarge the
19 second-to-last paragraph on that page.

20 **Q. (BY MS. ATTON) Now, this passage reports on**
21 **the number of wells. What's the significance of these**
22 **numbers?**

23 **A.** The significance of this is merely that they
24 were panicking. Maybe that's an overstatement, but I
25 don't really think that it is. They knew there was a

1 water shortage, and they knew that wells were a
2 possibility because the overall understanding is that
3 there was an underground water supply and so by the
4 end of 1946 -- I'm sorry, there were only 11 at the
5 end of 1946, that had grown to 56 by the end of 1947
6 so, you know, 46 -- 45 wells had been dug in that
7 year, and then just a couple months later, 14
8 additional wells. So clearly, things were happening
9 rapidly. People were responding to the shortage of
10 surface water, and this is the -- this is the
11 direction they were turning in.

12 **Q. Let's look at another exhibit.**

13 **MS. ATTON:** If you could bring up Texas
14 610.

15 **Q. (BY MS. ATTON) What is this exhibit?**

16 A. This is a study that was done in 1961, also
17 at the behest of the Elephant Butte Irrigation
18 District, who reached out to the civil engineering
19 department at New Mexico State University and asked
20 them to do -- asked this particular person, Narendra
21 Gunaji to do an additional study of groundwater
22 conditions on Elephant Butte Irrigation District.
23 This is after, by this time, the drought had ended,
24 and this was sort of a request to do a study to look
25 backwards using actual data to see what had happened

1 in the district during this period of drought.

2 Q. Let's look at the introduction to the report,
3 which I think is on Page 5.

4 MS. ATTON: I think might need to go
5 back one. Perfect. Thank you. Can you please
6 enlarge the second paragraph on this page?

7 Q. (BY MS. ATTON) Now, what does Mr. Gunaji
8 report here?

9 A. So, again, this is -- this report is being
10 done, and this study is being done after the drought
11 has -- has ended, and he explains that during that
12 time period, from the time of Conover's report to the
13 time he is writing, that there had, in fact, been what
14 he calls the coordinated use of surface and
15 groundwater for irrigation and that had been -- it had
16 been practiced in the district. And he explains that
17 the groundwater had been used to supplement the
18 deficient surface supply. Importantly, and this is
19 really critical here, he takes issue with some of the
20 predictions that Conover made. He says here that the
21 groundwater that was pumped did not de-water the
22 aquifer and that that in and of itself was evidence
23 that there was a very large storage capacity of that
24 groundwater basin. In addition to that, this last
25 sentence is worth reading into the record. He

1 says, "There is little doubt that the future of the
2 highly-developed agricultural economy in the Elephant
3 Butte Irrigation District is dependent upon the use of
4 groundwater as a supplemental supply when shortage of
5 surface water occurs."

6 **Q. Let's look at the passage that crosses Pages,**
7 **I think it may be 5 and 6. Yes. Starting, "As a**
8 **result of," and over to the next page. What does**
9 **Mr. Gunaji report here?**

10 A. So he's repeating more or less the same
11 thing, that during the time, 1951 to '57, and I would
12 say it started earlier than that, that groundwater was
13 used to supplement shortage of surface water
14 allotments, and while it did, in fact, lower the
15 ground table we know from the previous passage that it
16 didn't de-water the aquifer, and he notes here that it
17 also created a lot of interest in the outflow and the
18 -- the content and the type of groundwater that was in
19 the area.

20 **Q. Let's look at Page 7 and to the first**
21 **paragraph.**

22 **MS. ATTON:** Perhaps we could just take
23 the highlights off if it's possible.

24 **Q. (BY MS. ATTON) I'm afraid the highlighting**
25 **was already on the document, so it is what it is.**

1 A. No problem.

2 **Q. So what Mr. Gunaji reports here on the**
3 **situation now the drought has ended, what were his**
4 **findings?**

5 A. So he looks at the water table, and the
6 original location of the water table was about 8 to 10
7 feet below the surface, and he notes here that after
8 the, what he calls extensive groundwater pumping
9 during the drought, that the water table had dropped
10 to 16 feet. So about twice as deep as it had been
11 before the drought. However, he points -- he points
12 out here that, "When the surface water supply returned
13 to normal in '58, and pumping was more or less
14 discontinued or at least declined dramatically, that
15 the water table returned to an elevation only about 2
16 feet below the normal water table within a period of
17 two years." So what he's pointing out here is that
18 although Conover had stated four years and would take
19 four years of normal supply to recover the groundwater
20 and, quote unquote, repay the debt, he's actually
21 saying here in 1961, using real data from a real
22 drought and real life conditions, he's saying that
23 that groundwater table recovered far more rapidly and
24 that the -- the -- one of the things he notices here,
25 and he states as a conclusion is that that obviously

1 means that the ground -- that the surface is actually
2 highly permeable and that things recover much more
3 quickly than people had even thought that they would.

4 **MS. ATTON:** And, Your Honor, just for
5 the record, Texas Exhibit 610 has various
6 highlighting, and that's not highlighting from New
7 Mexico. I don't know the basis of that highlighting.

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

9 **Q. (BY MS. ATTON)** Let's turn to Page 17. So
10 we've enlarged here a passage that's at Lines, I
11 think, 8 through 20 on Page 17 of this report. And,
12 again, apologies for the highlighting. So I think
13 this is the passage, Dr. Stevens, that you're
14 referring to in which Mr. Gunaji refers to Conover's
15 estimates?

16 A. That's right.

17 **Q. Can you explain what Mr. Gunaji says here?**

18 A. Yes. So he -- he summarizes Conover at the
19 very beginning of this passage here, and he says that
20 Conover's predictions was that -- were that the flow
21 in the drains would diminish and that it would take
22 eight or nine years before the flow of drains would
23 return to normal. And I just want to point out, just
24 so it's not confusing, Conover's ultimate report is
25 quite long, and he talks about -- he says the

1 four-year thing, which we talked about a minute ago,
2 that it would take four years to repay the debt, but
3 different parts of the report have different tables
4 that use different time periods for recovery. And
5 here, Gunaji is reporting on a different part of that
6 report where Conover states it would take eight or
7 nine years before the flow of drains would be
8 recovered and returned to normal. But he says here
9 about midway down that actual recovery of the effects
10 of the drought of the '50s actually showed that
11 prediction to not be true. And then he goes through
12 the water table, which I explained just a minute ago,
13 and explains that by 1958, the surface water supply
14 had returned to normal. There was very little pumping
15 in the area, and that the groundwater table had
16 actually recovered as close to normal as they could
17 possibly have expected, more than they expected,
18 actually, and instead of being 8 feet, it was down to
19 9.75 feet, but that that was pretty close to normal,
20 and, again, a much faster recovery. And then finally
21 in this passage, he says that the flow of drains also
22 recovered much earlier than had been predicted in
23 Conover report.

24 **Q. Let's turn to Page 37.**

25 **MS. ATTON:** If you could enlarge

1 Paragraph No. 12 on that page. Thank you.

2 **Q. (BY MS. ATTON) Now, this paragraph is in the**
3 **summary and conclusions section of the Gunaji report;**
4 **is that right?**

5 A. It is.

6 **Q. What does Mr. Gunaji conclude here?**

7 A. So in this paragraph, he provides direction
8 to his client, EBID, and he says, "Groundwater should
9 be used as a supplemental water supply for irrigation
10 in years of deficient surface water supply." And then
11 he proceeds to explain that, "The quantity of
12 groundwater in storage is sufficient to supply
13 supplemental irrigation requirements for a drought
14 period of ten years duration." He does qualify that
15 at the end by saying that if there's too much use and
16 then reuse of these waters, that there will be a salt
17 problem. But, again, with regard to the quantity, he
18 is recommending that Elephant Butte Irrigation
19 District consider groundwater a supplement to surface
20 water in times of shortage.

21 **Q. Let's look at another exhibit.**

22 **MS. ATTON:** Could you bring up New
23 Mexico 1546?

24 **Q. (BY MS. ATTON) Dr. Stevens, do you recognize**
25 **this document?**

1 A. I do.

2 **Q. And what is it?**

3 A. So this is now a study of similar topics, but
4 moving a little bit further downstream into Texas, and
5 this was a U.S. Geological Survey study done by
6 Leggat, Lowry, and Hood that was prepared in
7 cooperation not with EBID but instead with the City of
8 El Paso and the Texas Water Commission, but also
9 looking at the groundwater resources of the lower Rio
10 -- I'm sorry -- the lower Mesilla Valley in both New
11 Mexico and also in Texas.

12 **Q. Can you explain the context of this report?**

13 A. The context of this report was that the City
14 of El Paso needed water, and they were looking at the
15 possibility of using the Rio Grande and also just
16 examining the situation with groundwater resources in
17 this area and exploring the data there.

18 **Q. Let's look at Page 5. And if we could
19 enlarge the fifth paragraph on that page. What does
20 Mr. Leggat report here?**

21 A. Mr. Leggat is noting here that the City of El
22 Paso had been pumping groundwater for both public
23 supply, as well as for irrigation, also during the
24 drought period from '51 to '56. He gives us some
25 numbers here in terms of volume, which is interesting,

1 and it's -- it's not a small amount. He says, "In
2 1958, the City of El Paso wells pumped an average of
3 6.8 million gallons per day from the deep and medium
4 aquifers of the Santa Fe." So he's explaining it
5 basically just putting some numbers to it, and he says
6 that it's about 50 percent of the annual recharge to
7 the Santa Fe. So he's basically just laying out what
8 the situation is in the El Paso area.

9 **Q. Let's look at Page 17 and the third**
10 **paragraph. What is reported here?**

11 A. So the authors of this study here are
12 describing that small water -- small quantities of
13 groundwater had been used for irrigation in this area
14 for what they say many years prior to 1954, which, of
15 course, comports with what we saw with the -- the
16 Lester and Vernon report back in 1903, that El Paso
17 had been deploying wells for quite a long time. And
18 then he explains that the number of wells had
19 increased during the period of shortage during the
20 drought that we've talked about, and that by the end
21 of 1954, there were 250 wells in this area in the El
22 Paso, Texas area taking 40,000 acre-feet of water to
23 irrigate cotton and alfalfa, and by October, 1957, the
24 Bureau of Reclamation, which is another agency in the
25 Department of Interior, reported that 205 irrigation

1 wells were still in operation.

2 **MS. ATTON:** Staying on the same page,
3 let's enlarge the last eight lines of the first
4 paragraph.

5 **Q. (BY MS. ATTON) Now, Mr. Leggat here is**
6 **reporting on activities in El Paso. What was**
7 **happening in El Paso at this time?**

8 A. So El Paso was drilling wells in the shallow
9 aquifer and pumping the water into the river for
10 delivery to treatment plant in El Paso for municipal
11 uses and he explains that six additional wells were
12 drilled in 1955 and that the capacity of those wells
13 in the shallow well field was 15 million gallons per
14 day.

15 **Q. There's also reference in this paragraph to a**
16 **pipeline. Can you give us a bit of background on**
17 **that?**

18 A. Yes. They found that in the transmission
19 from the wells to the city that they were losing too
20 much of that water so they constructed a pipeline that
21 could -- that had the capacity of delivering 20
22 million gallons of water per day. They had hoped that
23 the pipeline would reduce those transmission losses?

24 **Q. Now, staying on the same page, could you**
25 **enlarge the last paragraph, which also crosses over to**

1 the next page? We can just about see that here on the
2 split screen.

3 Now, again, still reporting on El Paso, what
4 does Mr. Leggat report as to industrial use of
5 groundwater in El Paso at this time?

6 A. He also reports that there is a lot of
7 industrial use. He calls it large-scale industrial
8 use of groundwater, in particular, which began in
9 1951, and he describes the 40 wells that were dug in
10 the south end of the valley with the well field that
11 ultimately developed into ten wells. Those 40 wells
12 were just test wells. He also explains that the
13 industrial use of groundwater increased each year
14 except when ASARCO, or American Smelting and Refining
15 Co. abandoned its well field. So, of course, El Paso
16 is a big industrial city, and it was continuing to use
17 groundwater and increase that use during this time
18 period.

19 Q. Now, you've identified activity by the U.S.
20 Department of the Interior and the Bureau of
21 Reclamation that's relevant to groundwater use within
22 the project; is that right?

23 A. Yes.

24 Q. Let's look at some of those documents.

25 MS. ATTON: Could we bring up New Mexico

1 1657?

2 **Q. (BY MS. ATTON) Dr. Stevens, what is this**
3 **exhibit?**

4 A. This is a press release from the Department
5 of Interior issued on October 30th, 1950, and its
6 title is, "Groundwater Pumping to Temper Effects of
7 Droughts in Elephant Butte District, New Mexico."

8 **Q. And what was the context of this document?**

9 A. As I mentioned a few minutes ago, Mr. Conover
10 had conducted a study related to the possibility of
11 using groundwater for supplementing the reduced flows
12 on the surface, and the Department of Interior is
13 doing a press release here to publicize the results of
14 that study. As we know, there was preliminary memo
15 issued in 1947. By 1950, according to the context of
16 this, there had been -- the study had been completed,
17 and Conover had issued some sort of report internally
18 that he called the groundwater conditions in the
19 Rincon and Mesilla Valleys and adjacent areas in New
20 Mexico, and this is what this is, is just releasing
21 those results.

22 **Q. Now, 1950 was during this period of drought**
23 **that we've been talking about; is that right?**

24 A. That's right, yes.

25 **Q. Okay. And what does the Department of**

1 **Interior announce or report in this first paragraph**
2 **here?**

3 A. So the Department of Interior is saying in a
4 publicized press release, "Groundwater in the
5 subsurface reservoirs of the Rincon and Mesilla
6 Valleys, New Mexico, can be pumped from wells to
7 supplement surface supply during drought years in the
8 Elephant Butte District of the Rio Grande Project."

9 Q. I think you mentioned there was some internal
10 version of the Conover report at this time. Perhaps
11 we could enlarge the paragraph at the top of the next
12 page that might give us a little bit of information on
13 that.

14 A. Yes.

15 Q. So this --

16 A. So this here --

17 Q. Sorry. Continue. You continue, Dr. Stevens.

18 A. Okay. This is just an explanation that the
19 report itself, which at this point was 316 pages,
20 could be found either at the state engineer's office
21 of New Mexico or the Elephant Butte Irrigation
22 District in -- in New Mexico. So the intent was here
23 to publish it perhaps later by the state, but as we
24 know, it was published in 1954 as a water supply paper
25 by the Geological Survey.

1 **Q.** Let's go back to the first page of this
2 exhibit, and if you could please enlarge the third
3 paragraph. Now, what does the Department of Interior
4 report here?

5 A. So the Department of Interior is saying that
6 -- reporting really and publicizing that the local
7 interest and the possibility of developing the
8 groundwater supply had been -- had originated when
9 there was lower stream flows between 1942 and 1946,
10 and so he explains that this investigation done by
11 Conover and the U.S. Geological Survey was to examine
12 the water bearing characteristics of the underground
13 flow to determine the feasibility, the possibility of
14 pumping that groundwater as a way to supplement the
15 surface supplies that were low.

16 **Q.** Let's enlarge the fourth paragraph. The
17 paragraph above that one. Now, here, there's
18 reference again to Conover, and there's a quote. What
19 do you understand that quote to mean?

20 A. Conover is pointing out, and he uses this
21 term, that groundwater and surface water supplies are
22 interdependent.

23 **Q.** Let's look at another exhibit.

24 **MS. ATTON:** Can we bring up New Mexico
25 1035?

1 **Q. (BY MS. ATTON) Now, what is this exhibit?**

2 A. This was a notice to the water project users
3 from August, 1946, describing or announcing to them
4 the irrigation schedule for the year or for the
5 remaining time of the growing season.

6 **Q. And I think in this exhibit, we have a**
7 **collection of water notices from this year and for a**
8 **number of following years; is that correct?**

9 A. Yeah, that's correct. I think that this
10 exhibit goes -- has similar announcements dating to
11 1951, if I'm not mistaken.

12 **Q. Let's look at one of those announcements.**
13 **Can we have a look at Page 3? Now, we have an**
14 **announcement here from August 12th, 1947; is that**
15 **right?**

16 A. Yes. That's correct.

17 **Q. Can you just explain what these announcements**
18 **are?**

19 A. These were issued by the Project to farmers
20 on the Project so that they could know what the
21 possibilities were of water supply and when that water
22 supply could be expected to come.

23 **Q. And do you know how regularly these**
24 **announcements were made?**

25 A. I think monthly, if I'm not mistaken, during

1 the growing season. I think that's right.

2 Q. Okay. Let's look at the next page. If you
3 could enlarge the last paragraph. Page 23. So we're
4 skipping forward a few pages here. Now, this
5 paragraph refers to a fine balance between water
6 supply and irrigation use, and towards the end of this
7 passage, there's a discussion of a change in crop
8 system. What do you understand is reported here?

9 A. So this particular document and this
10 particular announcement is discussing the water supply
11 for the coming -- coming time, the immediate time. It
12 states here that there might be a change in cropping
13 in times to come and that other crops might have
14 different water requirements, and he actually says --
15 this actually says that such a change in crops may --
16 must inevitably come about, and that makes the
17 delivery of water on an allotment basis each year
18 really critical, but it's difficult to hold to that
19 because those different crops change all the time, and
20 the exact language that he uses is a change in crop
21 system such as a material decrease in acreage planted
22 to cotton with a corresponding increase in the acreage
23 of other crops having a higher water requirement, as
24 must inevitably come about, may make such control and
25 use all the more difficult but imperative.

1 **Q.** Let's move forward to another exhibit, New
2 **Mexico 0435.**

3 A. If you don't mind, I'm just going to stop for
4 a second. There's some activity outside the window.
5 I just want to close the shades. It's very
6 distracting.

7 **MS. ATTON:** Your Honor, may we take a
8 minute just to readjust here?

9 **JUDGE MELLOY:** Go ahead.

10 **THE WITNESS:** Thank you.

11 **MS. ATTON:** Dr. Stevens, is that a
12 better situation?

13 A. Yes. Just for everybody on the call,
14 suddenly, there were painters right outside the window
15 banging and talking on the outside of the building so
16 bad timing, and I apologize for the disruption.

17 **MS. ATTON:** Your Honor, may we continue?

18 **JUDGE MELLOY:** I'm sorry. You may.

19 **Q.** **(BY MS. ATTON)** Let's look -- so we've brought
20 up another exhibit here, New Mexico 435, on the
21 screen.

22 A. Yes.

23 **Q.** If we could just enlarge the top of that
24 page. Do you recognize this exhibit?

25 A. I do, yes.

1 Q. And I think this is a collection of water
2 announcements dated 1951 through 1957, if you recall?

3 A. Yes, that's right.

4 Q. Let's turn to Page 7. So we have here a
5 water announcement from the Bureau of Reclamation
6 dated August 1st, 1951.

7 MS. ATTON: Can we enlarge the last
8 paragraph and the signature block?

9 Q. (BY MS. ATTON) Now, who is L.R. Fiock, and
10 what was his involvement with the Project at this
11 time?

12 A. At this time, he was the Project manager for
13 the Rio Grande Project. He had been involved in the
14 Project, though, I think the documents that I have
15 seen date back to at least the 1930s, so he had been
16 around for quite a while.

17 Q. Now, what does Mr. Fiock announce in this
18 August, 1951, announcement?

19 A. So this is one of the water announcements
20 that they issued regularly during the growing season,
21 and in this particular announcement, Fiock is asking
22 water users who have pumps to arrange to transfer
23 their unused surface water allotment to those who were
24 in need of additional water. So, in other words, he
25 was recognizing that pumping was going on on the

1 project, and he is saying that if -- if possible,
2 those folks who are getting their water from the
3 groundwater from their pumps in their wells should
4 transfer their unused surface water allotment to other
5 farmers on the project who may not have access to
6 similar resources.

7 **Q. What's the significance of the last sentence**
8 **here?**

9 A. It says here that if these farmers are
10 willing to negotiate a transfer, that they should come
11 to the Bureau of Reclamation offices in either Las
12 Cruces or El Paso or the Bureau of Reclamation Project
13 Division Offices in Las Cruces or Isleta for the
14 facilitation of that transfer, that the Bureau of
15 Reclamation would help them with that.

16 **Q. This statement isn't directed not just to**
17 **farmers in New Mexico but also to farmers in Texas; is**
18 **that right?**

19 A. Yes, that's right. He mentions specifically
20 El Paso and Isleta, so this is an announcement that
21 was made, if you look at the top of this document, all
22 the way to -- well, to everybody on the Project in
23 both New Mexico and in Texas.

24 **Q. Let's look at Page 11. We have a water**
25 **announcement here from March 7, 1952. And apologies**

1 that this page is not the best legibility, but let's
2 enlarge then the last paragraph on Page 12, again,
3 with the signature block. Now, what does the Bureau
4 announce here in March, 1952?

5 A. So this is spring of the following year, and
6 as we all know, the surface water supply had not
7 improved by this point, and Fiock is, again, asking
8 water users who are intending to use their pumps for
9 all or even a part of their requirements for their
10 cropping as they're anticipating the coming growing
11 season. If they're willing to transfer their
12 allotment to other water right lands, that they
13 should, again, contact either the districts or the
14 water improvement district -- I'm sorry -- or the
15 Bureau of Reclamation districts in Isleta, which is in
16 Texas so same announcement next year, beginning of the
17 growing season instead of middle or toward the end.

18 Q. And, again, this announcement is not limited
19 to farmers in New Mexico, it's farmers project wide,
20 including in Texas; is that right?

21 A. Yes, that's correct.

22 Q. Let's turn to Page 13. What do we have on
23 Page 13?

24 A. So this is just a month later. It's another
25 water announcement that was issued on April 7, 1952,

1 also by Mr. Fiock.

2 **Q. Let's enlarge the second-to-last paragraph on**
3 **this page. What is the Bureau announcing here?**

4 A. So this is a subtle but important shift in
5 language, so this is not just saying those of you on
6 the Project who are willing to do this or who are
7 already pumping the water. Now, Fiock and the Project
8 is issuing formal announcements urging them -- urging
9 these farmers who are using wells to transfer their
10 allotments to those who did not have access to wells.
11 So this is becoming sort of more of a plea, if you
12 will, from the federal agency to the farmers under the
13 Project.

14 **Q. Let's look at Page 30. What do we have here?**

15 A. Another water announcement, this one from two
16 years later, March 1, 1954, so anticipating the
17 growing season.

18 **MS. ATTON:** Please enlarge the last
19 paragraph and the signature on the next page, Page 31.

20 **Q. (BY MS. ATTON) Now, who is W.F. Resch, and**
21 **who -- what was his involvement with the project at**
22 **this time?**

23 A. So he had taken over as project manager by
24 now, and he was serving in the role that Mr. Fiock had
25 served in previously.

1 **Q. And what is the Bureau announcing here in**
2 **March, 1954?**

3 A. So in this particular announcement that was
4 sent to all of the farmers in the Project, he wrote
5 that, "Farmers with good irrigation wells are
6 requested to use those to those, quote, greatest
7 extent possible as a source of supply," and then,
8 again, he urges them to make for -- make available
9 their allotments, their surface allotments, for
10 transfer to the farmers who don't have similar options
11 for pumping from wells. And, again, he says where
12 those farmers who were going to make those transfers
13 can go physically to do that, those are the irrigation
14 district offices or the Bureau of -- Bureau of
15 Reclamation division office in Texas and Isleta.

16 **Q. And, again, this announcement is Project wide**
17 **to farmers both in New Mexico and in Texas?**

18 A. Correct.

19 **Q. Let's turn to Page 34. What do we have here?**

20 A. This is just a couple months later in June,
21 1954, another water announcement to all of the farmers
22 on the Project in both New Mexico and Texas.

23 **Q. Let's enlarge the second-to-last paragraph on**
24 **this page. What is the Bureau announcing here in**
25 **June, 1954?**

1 A. Here, by now things are pretty desperate on
2 the project, and he states here that the water
3 shortage is serious, that the Project in the next ten
4 weeks, of course, which is a critical part of the
5 growing period from June to August, will experience,
6 as he puts it, the, quote, most acute water stress
7 period in the history of the Project unless generous
8 ample rains come, which nobody really expected. And
9 he states at the end the gravity of the situation
10 cannot be minimized.

11 **Q. Let's now look at the next paragraph, the**
12 **last paragraph on that page. What is the Bureau**
13 **announcing here?**

14 A. So having set up the situation with the
15 language I just read into the record, he now urges
16 farmers with the irrigation wells that have capacity,
17 he urges them, said, "Are urged to help their
18 neighbors in order to complete -- prevent complete
19 loss of crops in those cases where farmers have not
20 been able to provide themselves with wells." So he is
21 really sort of recognizing and using language that
22 recognizes that the Project itself is in jeopardy here
23 and that there are farmers who have not been able to
24 dig wells and who desperately need the surface
25 allotments to be transferred to them and he's urging

1 people with the wells to use them to the greatest
2 extent that they can and to transfer those over to the
3 farmers without such wells themselves.

4 **Q. Could you please just briefly explain the**
5 **last two or three sentences of this passage?**

6 A. So here he's explaining that he can license
7 and he will license pumped water from irrigation wells
8 to farms through Project canals and laterals and he
9 can do that, and he explains that unfortunately
10 transfers from one lateral system to another are
11 impractical, but that they can do the transfers on the
12 same ditch. So he's, again, explaining that the
13 Bureau of Reclamation is there to help them in any way
14 possible so that the Project can be saved, even to the
15 point of physically issuing licenses and physically
16 helping them convey the water.

17 **Q. What do you take here from the reference to**
18 **helping your neighbor?**

19 A. I think this was a situation where everybody
20 was in the same boat, and there was no way that this
21 project was going to survive without everybody coming
22 together and recognizing the gravity of the situation.
23 There was -- there were -- there was one period at
24 which during which the allotment was a half of a foot
25 a year, and so, you know, there was not enough water

1 in the system, and they had to band together to make
2 sure that they could save their crops and save the
3 system and protect the federal investment and their
4 own investment that had been made in this project.

5 **Q. And, again, that sort of mentality and action**
6 **was Project wide, both in New Mexico and in Texas?**

7 A. It was.

8 **Q. Let's turn to Page 37. What do we have here,**
9 **Dr. Stevens?**

10 A. We have another water announcement. This is
11 now the following year, March, 1955.

12 **Q. Let's enlarge the third paragraph. What does**
13 **the Bureau announce here in March, 1955?**

14 A. Well, if he wasn't alarmist the previous
15 year, he certainly is now. He states here that the
16 conditions on the Project with respect to water
17 distribution are, quote, the most critical of any time
18 during the drought period. So even worse if you read
19 them in order than the previous year. He also notes
20 here that the drop in groundwater from the pumping had
21 resulted in return flows being minimized and that very
22 little cushion, he says, can be expected from return
23 flows. Of course, many farmers were dependent on
24 those return flows. And so he warns that the
25 reservoir itself might be shut down in May, which is

1 unheared of. So this is quite -- quite an alarm being
2 sounded here.

3 **Q. Let's enlarge the fifth paragraph**
4 **starting, "The difficulty in." So what is the Bureau**
5 **announcing in this paragraph?**

6 A. So, again, because of the lack of return
7 flows, the diminished return flows, he's explaining
8 here that the operation of the distribution system is
9 not going to be as it normally is and that to equally
10 distribute the available water, that's his language
11 here in the middle of this paragraph, that they may
12 have to change the way they operate the -- the Project
13 and that there might be a system of on-and-off
14 diversions of limited periods so that they can
15 accommodate that equal distribution of available
16 water.

17 **Q. Now, 1955, the date of this water**
18 **announcement, that was the year immediately following**
19 **the publication of the 1954 Conover report; is that**
20 **right?**

21 A. That's correct, yes.

22 **Q. And there's a reference in this passage we**
23 **have here on the screen to equitable distribution.**
24 **What do you understand that to mean here?**

25 A. Well, if you take it with the previous

1 sentence, it's clear here the way this project
2 operated by distributing equal amounts of water to
3 every acre on the project. So it said here in order
4 to equally distribute the available water, frequent
5 changes in operational programs may be necessary. And
6 then he repeats it. Equitable distribution throughout
7 the Project may require, and then he explains what the
8 Project may have to do to accommodate that equal
9 distribution.

10 **Q. Let's look at another exhibit.**

11 **MS. ATTON:** Can we bring up US-656?

12 **Q. (BY MS. ATTON) Dr. Stevens, do you recognize**
13 **this document?**

14 **A.** I do.

15 **Q. What is it?**

16 **A.** This is a report put together by the Bureau
17 of Reclamation for the Rio Grande Project, and it
18 relates to water conservation plans. This is, again,
19 still in the middle of the drought and the Bureau of
20 Reclamation recognized across the board that it needed
21 to look at opportunities for conservation, and this is
22 a report related to that on the Rio Grande Project.

23 **Q. So this document was finalized approximately**
24 **one year after the 1955 water announcement we just**
25 **looked at?**

1 A. That's correct, yes.

2 **Q. Let's look at Page 20. If we can enlarge the**
3 **first paragraph here under the title, "Pumping of**
4 **groundwater." What does the Bureau report in this**
5 **passage?**

6 A. So as I mentioned a few minutes ago, it was
7 imperative to save the Project to use groundwater as a
8 supplement during these times of surface water
9 shortage, and this report is reiterating that. It
10 says, "The recent pumping of groundwaters underlying
11 the Project lands has been essential to preservation
12 of the established Project irrigation." But it also
13 points out here that it's going to take a little bit
14 of time to reconvert to surface water irrigation and
15 that a sizable capital investment had been made and
16 that capital investment and those wells had changed
17 Project conditions. So, again, it shows that the
18 project is, you know, evolving still, that it evolves
19 through these periods of difficulty and that
20 conditions are changing a lot.

21 **Q. Let's look at the number of groundwater wells**
22 **that are operating in 1956, as reported by the Bureau**
23 **here. Now, what does this passage here tell us about**
24 **the number of wells on Project lands in 1956?**

25 A. So the total number of Project wells -- wells

1 on Project lands is probably a better way of putting
2 that, are -- span both New Mexico and Texas. So you
3 see that there are 324 in Rincon Valley, which is
4 entirely in New Mexico, and then in Mesilla Valley,
5 you have 790 wells in the New Mexico part of that
6 valley and 86 in the Texas part of that valley and
7 then in the El Paso Valley, you have 485 wells that
8 had been drilled in the previous period of drought.

9 **Q. Just to be clear, the El Paso Valley is**
10 **exclusively in Texas; is that right?**

11 A. That's correct. I should have said that.
12 Yes.

13 **Q. And we have a total number of project wells,**
14 **project wide here, reported to be 1,685 as of 1956; is**
15 **that right?**

16 A. Yes. And, again, those were wells on Project
17 lands, yes.

18 **Q. Do you know how these wells were financed?**

19 A. I can't really speak to each individual well.
20 Of course, I haven't looked at --

21 **MR. HOFFMAN:** Objection; relevancy, Your
22 Honor. Objection; relevancy.

23 **JUDGE MELLOY:** Overruled. You may
24 answer.

25 A. So the wells themselves, I can't speak to

1 each individual well, but I can say that they were not
2 financed by Reclamation. Unlike other -- other
3 changes that were made to the Project, such as the
4 drainage that was constructed in the 1910s and 1920s,
5 these wells were financed individually by the farmers,
6 and there were some loans that were available to the
7 farmers that were made available to the farmers, but
8 this was not -- these were not wells that were
9 financed by the federal government through the
10 Reclamation fund.

11 **Q. (BY MS. ATTON) Let's look at another exhibit.**

12 **MS. ATTON:** Can we bring up New Mexico
13 899?

14 **Q. (BY MS. ATTON) Dr. Stevens, what is this**
15 **exhibit?**

16 **A.** This is an article from the El Paso -- the
17 local newspaper, the El Paso Herald Post from 1951.

18 **Q. Now, do you see there in the middle bottom**
19 **right, an article that's titled, "U.S. Engineer Urges**
20 **614 Wells in Valley"?**

21 **MR. HOFFMAN:** Your Honor, we had an
22 objection to this, I believe.

23 **JUDGE MELLOY:** All right. What's your
24 position on its admissibility, Ms. Atton?

25 **MS. ATTON:** So, Your Honor, this is a

1 newspaper article, so a publication from 1951. It's
2 self-authenticating under Federal Rule of Evidence
3 9026, and it's also an exception to the hearsay rule
4 under 803(16).

5 **JUDGE MELLOY:** Well, I think it is
6 admissible as a historic document. I will admit New
7 Mexico 899. Go ahead.

8 **Q. (BY MS. ATTON) Let's show this article**
9 **enlarged, and that's on the next page of this exhibit.**
10 **What is described in this 1951 article in the El Paso**
11 **Herald Post?**

12 A. This is a report of the U.S. Bureau of
13 Reclamation engineer recommending that the valley
14 farmers in El Paso area drill wells to satisfy their
15 water needs.

16 **Q. Can you take us, please, to the passages in**
17 **this exhibit that you think the Court should take note**
18 **of?**

19 **MS. COLEMAN:** Your Honor, I'm going to
20 object to this line of questioning. This -- so this
21 exhibit was not among the materials that Dr. Stevens
22 considered or produced to us. She has expressed no
23 opinion about this document or about what it says, and
24 the document is ripe with double and triple hearsay
25 beyond the scope of the exception. The document is

1 in, and we accept that, but the test -- her testimony
2 about it is outside the scope of anything she's
3 written in her five different submissions to this
4 court.

5 **JUDGE MELLOY:** Well --

6 **MS. COLEMAN:** And the document speaks
7 for itself.

8 **JUDGE MELLOY:** I think the document
9 speaks for itself. Let's move on. I'm not too
10 impressed by a newspaper article as very -- having a
11 lot of weight, let me put it that way. Let's move on.

12 **Q. (BY MS. ATTON) Let's look briefly at the**
13 **Project history for 1953. Before we do that,**
14 **Dr. Stevens, can you explain what Project history**
15 **reports are and the kinds of information that they**
16 **contain?**

17 **A.** Yes. Every year, the Project -- every
18 Project in the Reclamation -- all the Reclamation
19 projects issue a Project history that provides lots of
20 information about the things that happened on that
21 project during the previous year. They talk about how
22 many acres were irrigated, what crops were grown on
23 different parts, different divisions of the Project.
24 They talk about any sort of changes to diversions, any
25 sort of maintenance that was done on canals, all sorts

1 of things. So it's really sort of a -- a great diary,
2 if you will, of what happened on the Project in any
3 year. So you can trace all of those different things
4 over time on any Reclamation project.

5 **Q. Let's bring up Exhibit JT-218. Particularly,**
6 **we're looking at Page 7 here, and we've enlarged the**
7 **top of Page 7. Do you recognize this, what we have on**
8 **the screen here?**

9 A. I do.

10 **Q. What is it?**

11 A. This is a part of the Project history where
12 they were reporting on the operation and maintenance
13 of the irrigation system for one particular division
14 of the Rio Grande Project, the Isleta branch, and that
15 is in Texas.

16 **Q. Now, what is reported in this section of the**
17 **1953 Project history?**

18 A. So they explain that in 1953, they go through
19 what the allotment was from the reservoir for this
20 area, and it says here at the very end that, the drain
21 return flow and the water from 238 irrigation wells
22 that were installed during 1950 to 1953 ultimately
23 provided enough water for almost having a normal year,
24 even though the allotment itself had been much below
25 normal and expected allotments on the Project.

1 Q. Now, do the number of wells that are reported
2 here comport with the number that are identified in
3 the 1956 reconnaissance report that we've just been
4 looking at?

5 A. Yeah. They -- they trend the same direction,
6 yes.

7 Q. Let's look back at that 1956 reconnaissance
8 report, and that's Exhibit US-656. This is Page 10.
9 We've enlarged the first paragraph under the
10 heading, "Project Growth." What does the Bureau
11 report here?

12 A. So the Bureau of Reclamation in this
13 reconnaissance report from 1956 reports that for the
14 first time, the Project has reached the maximum amount
15 of acreage that it -- that it could reach under those
16 -- that 1938 contract of the 155,000 acres plus 3
17 percent. So in 1953, the Project reached that, and
18 the number is 159,768, and -- well, that's what this
19 particular part says.

20 Q. What's the significance of what's said in the
21 first paragraph here?

22 MS. COLEMAN: I'm going to object to
23 this line of questioning -- I'm sorry to interrupt,
24 Ms. Atton. I couldn't tell if you were done. I'm
25 going to object to this, as well. She didn't look at

1 this document either or express any opinion about it
2 previously, and it says what it says.

3 **MS. ATTON:** Your Honor, this is a
4 continuation of Dr. Stevens' testimony on this time
5 period about all of the same issues. This is a
6 document that's part of the record and is an admitted
7 exhibit.

8 **JUDGE MELLOY:** All right. I'll let the
9 witness answer, but can you clarify, you said "look at
10 the first paragraph here. What exactly -- could you
11 identify exactly what we're looking at?

12 **MS. ATTON:** Yes. So we're on Page 10 of
13 this 1956 Bureau report, and we have enlarged here the
14 first paragraph under the heading, "Project Growth" on
15 that page. Perhaps if we take the callout box down we
16 can see all of Page 10.

17 **JUDGE MELLOY:** No, I found it. Go
18 ahead.

19 **Q. (BY MS. ATTON) So we're looking here,**
20 **Dr. Stevens, at the first sentence of this paragraph.**

21 **A.** Yes. What he's saying here is that up until
22 the water shortages, the drought, had affected the
23 economy of the area, that the Project had very much
24 flourished and had been recognized as one of the most
25 prosperous developments the Bureau of Reclamation had

1 constructed.

2 Q. Let's look at the next paragraph on the same
3 page and the continuation of that paragraph that
4 crosses over to Page 11. Now, taking this snapshot in
5 time in 1956, what does the Bureau report here about
6 the population development in the lower Rio Grande?

7 A. This is really interesting, and it's an
8 interesting point sort of in the whole history of the
9 area. He notes here or they, the Bureau of
10 Reclamation, notes here that two things -- two really
11 important milestones converged at once. Number one,
12 that the peak development of water use, that is that
13 -- the maximum allowed acreage developed, that 159
14 number -- thousand number that we talked about a
15 second ago, and the drought occurred at the same time,
16 that they both were ushered in, is what he says,
17 ushered in at the change of the half century, and so
18 it's really interesting that using the groundwater and
19 the pumping, even though we're in the middle of this
20 great drought, allowed the Project to grow and reach
21 its maximum irrigated acreage during this same time
22 period. So that's the significance of this particular
23 callout.

24 Q. And you referred to, I think, 159,000
25 acre-feet, and you mean the -- that's the 155,000

1 acre-feet plus the 3 percent cushion that's in the '38
2 downstream contract?

3 A. It's not acre-feet. It's acres. So if I
4 said acre-feet, I misspoke. It's the 155,000 acres
5 that is outlined or delineated in that contract, the
6 1938 contract, plus the 3 percent cushion that is also
7 permitted in that contract, and it's acres.

8 Q. And just to be clear, this is -- while this
9 is a continuation of the same passage, it actually
10 spreads from Page 10 to Page 14 of the report, there
11 are various, I think, tables that are in between those
12 two pages?

13 A. That's right.

14 Q. So let's look at one of those in-between
15 pages, and let's look at Page 11 of the report. So we
16 have here Table 1. What is shown in Table 1?

17 A. This is a compilation of the total irrigated
18 acreage and the total released water from storage from
19 the year 1915 to 1955, and it shows the growth in
20 acreage from that first delivery of storage water in
21 1915 to 1955 and showing -- it also shows, just so you
22 know, there's a few years in there where the acreage
23 declines, and that was due to the depression in the
24 1930s. But generally, you see an upward trend until
25 you reach 1953, when you have that maximum acreage of

1 159,768.

2 Q. Let's turn to Page 17 of the report and the
3 passage that crosses the bottom of Page 17 to the top
4 of Page 18. So the title of this section in the
5 report is, "Problems and Needs of the Project Area."
6 What is reported in this passage?

7 A. This particular passage explains that what's
8 happening on the Rio Grande Project, which was
9 intending to be a surface project, had basically
10 because of the drought had come to rely upon
11 groundwater, and it says here that it's similar to the
12 same -- same problems or the same issues that arose on
13 the Salt River Project in Arizona and the Central
14 Valley Project in California. He makes the comparison
15 here and says, "Both of which were developed primarily
16 on the basis of surface water supplies, but ultimately
17 became dependent to a large extent upon pumping of
18 groundwaters to supplement the surface water supply to
19 meet the project's needs."

20 Q. Now, you testified earlier that you have
21 experience as an expert historian of other Reclamation
22 projects in the west?

23 A. Yes.

24 Q. Do you have any experience of the Salt River
25 Project in Arizona or the Central Valley Project in

1 **California?**

2 A. I worked on a study of the Salt River and
3 worked for the Salt River Project that's actually a
4 utility down in Phoenix back in the 1990s, so I have
5 some experience on that. I'm less familiar with the
6 central valley project in California.

7 **Q. What's your understanding of this passage we**
8 **have on the screen here, which crosses Pages 17 and 18**
9 **of the 1956 reconnaissance report?**

10 A. I think there are a couple of things to point
11 out about it. First is that the author of this report
12 makes the comparison that like those two projects,
13 this project, the Rio Grande Project, was developed as
14 a surface water supply project, but similar to those
15 two other projects, Central Valley and Salt River
16 Project, the Rio Grande Project also had come to
17 depend during times of drought on the development of
18 groundwater as a supplemental supply to those surface
19 water supplies when they became short.

20 **Q. Now, based on your review of the historical**
21 **record, at least up to the early 1960s, did anyone**
22 **ever complain about groundwater pumping on Project**
23 **lands and the potential depletive effects to stream**
24 **flow?**

25 A. Not that I've seen.

1 **Q.** **Now, Dr. Stevens, you're aware --**

2 **JUDGE MELLOY:** Is this -- are you about
3 to kind of change subjects here, Counsel? If so,
4 maybe this might be a good time to take our break.

5 **MS. ATTON:** I am, Your Honor, but
6 actually, my next passage here is really rather short
7 and then we will be done with Dr. Stevens' direct
8 examination.

9 **JUDGE MELLOY:** All right. Go ahead.
10 Well, let me just say one thing, though, Ms. Atton,
11 and I'll say this for all the counsel. I'm a little
12 bit concerned that the record is going to get muddied
13 in that you refer to page numbers as exhibit -- you're
14 using the exhibit number, which is fine, but then you
15 reference the document as that page number. Other
16 witnesses have used the document page number, but not
17 the exhibit number. I think for consistency purposes,
18 I'd ask everyone to use whatever number is on the
19 exhibit. For instance, you just had -- let me look
20 here, just as an example. I think you had Page 18 up.
21 In any event, for instance, US-0656 underscore 0020,
22 you identified that as Page 20. It's actually Page 15
23 of the document itself, and I don't have any problem
24 with using the exhibit number, and I think that's
25 probably the way we should go, but we should be

1 consistent throughout so that the record doesn't
2 become, as I say, become confusing. So as I
3 understand it, you've been using the exhibit numbers
4 page numbers, and I think that's the way to go with
5 other witnesses' counsel, as well. All right. You
6 may proceed.

7 **MS. ATTON:** Thank you, Your Honor.
8 We're very happy to take a short break now if that
9 would be your preference.

10 **JUDGE MELLOY:** Why don't we take 20
11 minutes. We've been going for quite a while. We'll
12 go to 1:20. All right?

13 (Recess.)

14 **JUDGE MELLOY:** All right. Looks like
15 we're all back. Should we get started? Go ahead, Ms.
16 Atton.

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

18 **Q.** (BY MS. ATTON) Dr. Stevens, you're aware that
19 the United States retained an expert historian,
20 Nicolai Kryloff, in this case?

21 A. Yes, I am.

22 **Q.** And you're aware that the United States has
23 not called Mr. Kryloff to testify at this trial?

24 A. Yes. That's my understanding.

25 **Q.** Now, Mr. Kryloff was deposed in this case

1 back in August of 2020, and you attended his
2 deposition?

3 A. I did.

4 MS. ATTON: Can we bring up Exhibit
5 NM-3000? We have here highlighted on the right side
6 of the screen Page 4 of that exhibit, and it's just
7 illustrating and showing here that Jennifer Stevens
8 was marked as present at Mr. Kryloff's deposition.

9 Q. (BY MS. ATTON) Dr. Stevens, are you aware
10 that New Mexico designated parts of Mr. Kryloff's
11 deposition testimony for this trial?

12 A. Yes.

13 Q. And have you read these designations of
14 Mr. Kryloff's testimony?

15 A. I have, yes.

16 Q. Let's look at a couple of those designations.
17 If we could go to Page 8 of this exhibit, and if you
18 could enlarge Mr. Kryloff's transcript at Page 73,
19 Line 23, through Page 74, Line 9. So I am going to
20 read this out loud if I may. So Mr. Kryloff is asked,
21 question here, "And here under this section, you start
22 by saying that, the Special Master's report and the
23 U.S. Supreme Court both reached the conclusion that
24 the Rio Grande Project was fully integrated into the
25 1938 Rio Grande Compact thereby serving as the vehicle

1 by which Texas received its apportionment of water,
2 right?"

3 "ANSWER: Yes."

4 "QUESTION: And we talked earlier about that
5 also applies to the apportionment of water to part of
6 New Mexico, right?"

7 "ANSWER: That's how I understand it, yes".

8 Please now enlarge a little further down at
9 Page 74, Line 16 through Line 24 for the record, this
10 crosses the page of NM-3000 Pages 8 to 9. Again, I'm
11 going to read this out loud.

12 "QUESTION: If we look at that sentence again
13 that I was just reading and we see that you say, They
14 both reached a conclusion that the Rio Grande Project
15 was fully integrated into the 1938 Rio Grande Compact,
16 based on your review of the historical record, does
17 that record support that conclusion?"

18 "ANSWER: I would say that my reading of the
19 Compact itself leads me to agree with the conclusion
20 reached by Justice Gorsuch and the Special Master."

21 Dr. Stevens, do you agree with the opinions
22 that Mr. Kryloff states here?

23 MS. COLEMAN: I'm going to object to
24 that, Your Honor. She didn't provide a rebuttal
25 report to Dr. Kryloff.

1 **JUDGE MELLOY:** Well, I think she can
2 answer if she agrees with those opinions. Go ahead.

3 A. I do.

4 **Q. (BY MS. ATTON) Let's look at one other**
5 **passage of Mr. Kryloff's deposition.**

6 **MS. ATTON:** Could you please enlarge
7 Page 125, Line 5 of the deposition, through Line 13,
8 which crosses Exhibit pages NM-3000, 11 to 12. And,
9 again, forgive me, but I'm going to read this out
10 loud.

11 **Q. (BY MS. ATTON) "QUESTION: Turning to your**
12 **recommendations for further research, I understood**
13 **this to be suggesting that post-Compact actions can**
14 **help to understand what the states intending with --**
15 **intended with the Compact. Is that correct?"**

16 **"ANSWER: I think that post-Compact actions**
17 **could show us how other people have interpreted that**
18 **intent."**

19 **"QUESTION: Including the states themselves?"**

20 **"ANSWER: Yes."**

21 **Dr. Stevens, do you agree with these opinions**
22 **expressed by Mr. Kryloff?**

23 A. Yes, I do.

24 **Q. Can you just explain?**

25 A. Yes. We talked a little bit earlier about

1 how I personally interpret as a historian documents
2 and actions after and before a particular moment in
3 time that I'm studying, and this is an example where
4 he's saying that, yes, looking at post-Compact actions
5 by the parties are valuable piece of information to
6 have, and I agree with that.

7 **Q. Now, Dr. Stevens, a few moments ago, we**
8 **looked briefly at a newspaper article. I'm not going**
9 **to ask you about that article, but as a general**
10 **matter, how as an expert historian do you approach**
11 **newspapers as a source?**

12 A. Newspapers are one of many sources that I
13 tend to use in my research, and they are both a
14 primary source and a secondary source. They're a
15 secondary source in the sense that they're -- you
16 know, the reporter is reporting on something, but
17 they're a primary source in the sense that it helps
18 the historian understand the message that a community
19 is reaching about -- or the message that's reaching
20 the community about any given moment in time or a
21 given event. So I think that they are one of many
22 pieces of documentation I sometimes use in my
23 research, and I -- I weigh them, you know,
24 appropriately for each situation.

25 **MS. ATTON:** Now, Dr. Stevens, thank you.

1 I have no further questions at this time.

2 **JUDGE MELLOY:** Ms. Coleman, do you have
3 any questions?

4 **MS. COLEMAN:** I do, Your Honor, and we
5 are going to have Mr. Hoffman go first because
6 Dr. Stevens rebuts Texas' witness, but whichever order
7 you prefer?

8 **JUDGE MELLOY:** I guess it is New Mexico
9 -- that's -- okay. I was -- I was thinking when it
10 was Texas presenting the witness. No, I'll have
11 Mr. Hoffman go first then, Ms. Coleman. Go ahead,
12 Mr. Hoffman.

13 **MR. HOFFMAN:** Thank you, Your Honor.

14 CROSS-EXAMINATION

15 BY MR. HOFFMAN:

16 **Q.** Dr. Stevens, I'm Robert Hoffman. I represent
17 the State of Texas. I think I met you before at your
18 deposition?

19 **A.** Yes, that's right.

20 **Q.** Yes. Okay. I'd like to go over a little bit
21 of what you said yesterday. You were asked a question
22 early on in your testimony, and I'll read it. "And
23 Dr. Stevens, Dr. Miltenberger made much this morning
24 about his focus on the delivery schedules in the
25 Compact. Did you consider the delivery schedules in

1 your expert reports and declarations?" And you
2 answered, "I absolutely did. To imply that I ignored
3 this is totally not true." Do you recall your
4 deposition that was taken on July 27th, 2020?

5 A. Yes, I remember being deposed.

6 Q. Page 34 -- sorry. 36 and 37 of that
7 deposition, that issue was discussed, and I'll read
8 from the deposition starting at Page 36, Line 13.

9 MS. ATTON: Your Honor, can we possibly
10 ask for this to be put on the screen so we can all see
11 it?

12 MR. HOFFMAN: Peder, do you have it?

13 MR. RUDLING: I have a video clip if
14 that helps?

15 MR. HOFFMAN: Well, I don't need the
16 video. All I need is the statement, but you can --
17 you can play the video if you want, from Page 36 Line
18 13 to Page 37, Line 9.

19 (The video was played.)

20 MR. HOFFMAN: Thank you. You can stop,
21 Peder. I didn't mean to play that. I'm sorry.

22 THE WITNESS: No problem.

23 Q. (BY MR. HOFFMAN) I'm at home, also. I'm not
24 at my office, and my cats might show up so I apologize
25 in advance.

1 You also had made reference to that issue in
2 your second declaration, did you not? And I'll refer
3 to Texas Exhibit 532 at Page 8.

4 **MR. HOFFMAN:** Peder, if you could put
5 that up. Just the first sentence of the paragraph
6 that starts 24, enlarge that for us.

7 **Q. (BY MR. HOFFMAN)** I'll read that. "The
8 historical record does not provide details on
9 precisely how the schedules in the Compact's Articles
10 3 and 4 were ultimately derived, nor is it material to
11 the allocation of water" --

12 **JUDGE MELLOY:** Mr. Hoffman.

13 **MR. HOFFMAN:** Yeah, I can't see it
14 either.

15 **JUDGE MELLOY:** Also, you're speaking
16 awful fast. Poor Heather is going to get burned out
17 before the day is over so slow down a little bit.

18 **MR. HOFFMAN:** Okay. Can you make -- I
19 can't see the entire quote on the screen. Can anybody
20 else? It's cut off.

21 **THE WITNESS:** I can see it.

22 **MR. HOFFMAN:** Okay. Can you, Judge?

23 **JUDGE MELLOY:** I can see part of it. Go
24 ahead.

25 **MR. HOFFMAN:** Yeah. Well, I'd like you

1 to see the -- there you go. So I'll start again.

2 Q. (BY MR. HOFFMAN) "The historical record does
3 not provide details on precisely how the schedules in
4 the Compact's Articles 3 and 4 were ultimately
5 derived, nor is it material to the allocation of water
6 represented by the Compact; the schedules speak for
7 themselves." Is that what your rebuttal report said?

8 A. Yes. No, this is actually from the
9 declaration.

10 Q. I'm sorry. Your second declaration, right,
11 Exhibit 532?

12 A. Yes.

13 Q. Okay. Let's turn to Texas Demo No. 1,
14 Demonstrative Exhibit No. 1. And I want to --

15 MR. HOFFMAN: Could you take that down,
16 please? Actually, I want to show your Demo No. 3, if
17 you have it first, Stevens Demo No. 3.

18 MR. RUDLING: I have 1 and 2, but not 3.

19 MR. HOFFMAN: It's in 1. It's the No. 3
20 and No. 1 in Stevens Demo, direct demo. That's not
21 it. There we go. Again, make it so that everybody
22 can see it while they're watching the picture. In
23 other words, make it a little smaller. There we go.
24 Move it. Okay. That's fine.

25 Q. (BY MR. HOFFMAN) Now, these are your opinions

1 about the project and the Compact, correct?

2 A. These are some of them, yes.

3 Q. Some of them. One of them -- one of them,
4 No. 4, is, "The Project was intended to be flexible,
5 able to adapt to changing needs, technology and other
6 developments." Now, was your -- with respect to that
7 opinion, is there any limit you believe with respect
8 to what effects those developments can have on Project
9 waters -- I'm sorry -- Compact waters?

10 A. Can you say the question again?

11 Q. Yeah. Is there -- you talk about the Project
12 being flexible to adapt to changing needs in
13 technology and other developments. Well, is that
14 flexibility limited in any way by the Compact?

15 MS. ATTON: Your Honor, I object to the
16 extent that Dr. Stevens is asked about -- to give
17 testimony beyond that in her expert reports and
18 declarations and that she has given today and
19 yesterday.

20 JUDGE MELLOY: I certainly -- she's
21 talked about this. I think this is within the scope
22 of cross-examination.

23 Q. (BY MR. HOFFMAN) Can you answer the question?

24 A. Yeah, I think I can. I think I said that the
25 Project -- that the Compact was intended to protect

1 existing uses, so I -- I do believe that that's one of
2 the limitations. I think beyond that, I don't -- I
3 can't really think of any of the other limitations,
4 but I do think that it was intended to protect
5 existing uses.

6 Q. Okay. Let's go to Page 5 of the Special
7 Master's Report of May 21, 2021 which is our Demo
8 Exhibit 1, Page 5.

9 MR. RUDLING: I need an exhibit number,
10 please.

11 MR. HOFFMAN: It's Demo 1 on our list of
12 exhibits. It's the first demo on the first list of
13 exhibits. Page 5, please. There you go.

14 Q. (BY MR. HOFFMAN) You've read the Special
15 Master's Report of May 21, 2021, have you not?

16 A. I did when it first came out. I don't
17 remember all of it, but, yes, I read it back then.

18 Q. Okay. We'll try to refresh your
19 recollection. That paragraph at the bottom, can we
20 enlarge it. It basically says the Compacting states
21 intended to protect not only water deliveries into the
22 reservoir, but a baseline level of Project operations
23 generally reflected in Project operations prior to the
24 Compact formation. Have you studied Project
25 operations prior to the Compact formation?

1 **MS. ATTON:** Your Honor, objection.
2 Dr. Stevens is an expert historian. She's not
3 presented as an expert on Project operations in any
4 time period.

5 **MR. HOFFMAN:** Your Honor, she's been
6 testifying about Project operations from 1938 on
7 interminably. I think I can ask her whether she's, in
8 fact, looked at it prior to 1938.

9 **MS. ATTON:** Same objection.

10 **JUDGE MELLOY:** Overruled. The witness
11 may answer.

12 A. I think you asked me about whether I -- I
13 definitely looked at Project operations in the sense
14 that I read all of the project histories. Can you
15 remind me again exactly what you wanted to ask me
16 about that?

17 **Q. (BY MR. HOFFMAN)** I was asking whether --
18 excuse me. I asked you whether you've studied Project
19 operations prior to the Compact formation, and, now,
20 you've told me you looked at the -- what did you say
21 you looked at?

22 A. So I -- I mean, I've read a lot of documents,
23 as you can imagine, and some of them certainly dealt
24 with Project operations. I looked at the Project
25 histories so, yes, I've studied that.

1 Q. Did you have any opinion with respect to
2 Project operations prior to the Compact formation?

3 A. Can you be more specific? That's a very
4 broad question.

5 Q. Well, I mean, I don't see any of your
6 opinions on your Demo 3 that relate to Project
7 operations prior to 1938.

8 A. I think my -- the first two chapters of my
9 original report talk specifically about how the
10 Project came to be, about the construction of the dam,
11 about the different divisions that were constructed
12 beginning in 1906. So maybe I'm not understanding
13 what you mean by Project operations, but I certainly
14 don't think that it's absent from my materials.

15 Q. Okay. Now, I'm going to read further on with
16 respect to this paragraph in Demo 1. The Special
17 Master says, "The Compacting states did not express an
18 intent for agricultural practices, irrigation
19 practices, and other forms of development to remain
20 static. But they also did not express an intent to
21 allow unlimited indirect capture of the Rio Grande
22 surface flows through unregulated capture of
23 hydrologically connected water or the elimination of
24 Project return flows. The protection of a baseline
25 level of Project operations required, at a minimum,

1 the protection of return flows to effectuate the
2 Compact's apportionment. In broad strokes, this
3 condition can be viewed as Akin to a 1938 condition as
4 urged generally by Texas. But the exact contours of
5 that condition remain to be established at trial."

6 Are you presenting testimony today about the
7 exact contours of the condition that remain to be
8 established at trial, the baseline level of Project
9 operations?

10 MS. ATTON: And, Your Honor, I object to
11 the extent this seeks an opinion that's beyond
12 Dr. Stevens' expertise as a historian in this case.

13 JUDGE MELLOY: I'm going to overrule.

14 You may answer.

15 A. I think that I -- I have expressed an
16 opinion. I said earlier this morning that the only
17 thing that I saw in the historical record that was
18 frozen was the acreage that was represented by the
19 1938 downstream contracts, and I think that I also
20 expressed my observation in the review of the
21 historical record regarding the flexibility of the
22 Project, that the Project changed a great deal over
23 time, and that the plans leading up -- the data that
24 was collected leading up to the signing of the Compact
25 made very clear that they were looking at the future.

1 So I -- I do think that those things are important as
2 the Special Master and Your Honor weighs what that
3 baseline condition is and what it was intended in the
4 Compact, and -- and my job today and yesterday has
5 been to illuminate the parts of the historical record
6 that help -- I hope that help the Court determine what
7 that is.

8 Q. (BY MR. HOFFMAN) Now, you testified about the
9 57/43 split provided for in the 1938 contract between
10 the two districts, correct?

11 A. I have.

12 Q. That was a contract between the two districts
13 approved by the Bureau of Reclamation, correct?

14 A. Yes.

15 Q. And did Texas agree to that contract?

16 A. Texas did not sign that contract.

17 Q. Nor did New Mexico, correct?

18 A. That's right.

19 Q. Now, on Page 6 of the May 21, 2021, order,
20 His Honor continued later on, on Page 6, bottom --
21 middle of that full paragraph starting with the
22 word "taking the record." "Taking the record in the
23 light most favorable to Texas, the Compact and the
24 closely related downstream contracts together
25 establish the 57/43 split as a rough protected

1 baseline division of the Project deliveries as between
2 New Mexico and Texas downstream of the Reservoir, at
3 least in water short years. Although actual acres
4 under cultivation and actual water orders and
5 deliveries varied around this baseline amount, there
6 exists no benchmark for assessing the intent of the
7 Compacting parties as to the downstream apportionment
8 or the general framework of the bargain they sought
9 and achieved through Compact formation." Then he goes
10 onto say, "This determination, however, begs the
11 question, division of what?" Are you providing any
12 opinions today on what the -- the division of what is?

13 MS. ATTON: Your Honor, I object just to
14 the extent that Mr. Hoffman didn't completely
15 accurately read the passage there. He didn't -- he
16 missed at least one critical word.

17 MR. HOFFMAN: I give up. What was it?

18 MS. ATTON: You said that there exists
19 no benchmark when the text says there exists no other
20 benchmark.

21 MR. HOFFMAN: Okay. I'm sorry.

22 Q. (BY MR. HOFFMAN) With that amendment, can you
23 answer my question?

24 A. I think you asked me whether or not I'm
25 opining or offering any thoughts on what is being

1 divided?

2 **Q. Correct.**

3 A. It would be helpful to have the contract in
4 front of me, but my recollection is that that contract
5 is talking about the delivery of water from -- or the
6 allocation of water is probably -- I'd have to look at
7 the contract and have it up in front of me between the
8 two states in that proportion as it relates to the
9 irrigated acres.

10 **Q. The contract is not between the two states,**
11 **is it?**

12 A. I'm sorry. I apologize. Between the two
13 districts. I apologize. I misspoke. So as it
14 relates to the delivery between the two districts, my
15 recollection, without having the document in front of
16 me, is that it is talking about the allocation of
17 water in those proportions based on the irrigated
18 acreage, as it's represented here as 57/43. That's my
19 recollection, but I don't have the document in front
20 of me.

21 **Q. Yeah. But that's -- his Honor is asking not**
22 **about the division, but what is being divided.**

23 A. I answered that. And, again, I'd like to
24 have the language in front of me, the actual document,
25 but my recollection is that the allocation of water is

1 being split based on that acreage.

2 Q. So that -- you're saying, as I understand it,
3 that what is delivered into Elephant Butte by New
4 Mexico pursuant to the contract is what is being
5 divided?

6 A. I think you meant Compact.

7 Q. Yeah, I meant Compact.

8 A. And, again, I would really -- I would prefer
9 if we can have the document up in front of me before
10 we continue down the line of questions because I know
11 it's a very important document, and I don't want to go
12 based on my recall without the language in front of
13 me, but that is my understanding, yes.

14 Q. Talking about the Compact? You want to see
15 the Compact?

16 A. No. The contract, because you're asking me
17 if the contract and what I believe the contract to be
18 saying relates to the water coming in to Elephant
19 Butte Reservoir based on what's in the Compact, and
20 I'm saying I'm happy to answer the question, but I
21 don't want to from recall. That's all.

22 Q. Well, let me see if I can find it for you. I
23 have those exhibits somewhere.

24 MS. COLEMAN: If I may, it's Joint
25 Exhibit 426.

1 **MR. HOFFMAN:** Thank you. Can you put
2 that up, please, Joint 426?

3 **THE WITNESS:** Thank you.

4 **Q. (BY MR. HOFFMAN)** What is it in this contract
5 that tells you what is being divided?

6 **MS. ATTON:** Your Honor, I object to the
7 extent this calls for a legal opinion.

8 **MR. HOFFMAN:** I'm asking her as a
9 historian. I'm not asking for a legal opinion.

10 **JUDGE MELLOY:** Why don't you tell us --
11 restate your question, Mr. Hoffman. I'm not sure
12 where we are with this, what you're asking at this
13 point.

14 **MR. HOFFMAN:** Well, Your Honor's order
15 --

16 **JUDGE MELLOY:** Just state your question.

17 **MR. HOFFMAN:** Okay.

18 **Q. (BY MR. HOFFMAN)** One of the triable issues in
19 this case, as I understand it, is to determine what is
20 being divided 57/43, and my question to you is: What,
21 in your opinion as a historian, is being divided
22 57/43?

23 **A.** Project water.

24 **Q.** And Project water is what is delivered to
25 Texas under the Compact at Elephant Butte, correct?

1 **MS. ATTON:** Your Honor, objection. I'm
2 sorry. I'm not following the question.

3 **JUDGE MELLOY:** If you can answer.

4 A. The water in Elephant Butte is Project water
5 that belongs both to Elephant Butte Irrigation
6 District and to El Paso 1. Project water is in those
7 two states.

8 **Q. (BY MR. HOFFMAN) Does the Compact itself say**
9 **that?**

10 A. Say what specifically?

11 **Q. What you just said, that it goes to -- that**
12 **it belongs to Texas, EP1, and Elephant Butte**
13 **Irrigation District?**

14 **MS. ATTON:** Your Honor, I object to the
15 extent this seeks legal opinion.

16 **MR. HOFFMAN:** Again, I'm not seeking a
17 legal opinion. I just wonder what --

18 **JUDGE MELLOY:** I think we are starting
19 to wander into legal opinions here. I'm going to
20 sustain that objection.

21 **MR. HOFFMAN:** Okay. Can you put up
22 Texas Exhibit 544?

23 **Q. (BY MR. HOFFMAN) Do you recognize this**
24 **document, Dr. Stevens?**

25 A. Yes.

1 Q. What is this document?

2 A. I believe that's the '29 Compact.

3 Q. And let's go to Article 3 of the Compact,
4 which is on two pages down, I believe, or three pages
5 down. Do you recall that -- I take it you reviewed
6 the '29 contract -- Compact as part of your historical
7 research, correct?

8 A. I did.

9 Q. And Article 3 provides that the parties shall
10 do a bunch of information collection at gages,
11 establishing gages and to collect data during the term
12 of the 1929 contract, right -- Compact? I keep saying
13 contract. Compact.

14 A. The words are pretty close. Yes.

15 Q. Yes. Okay. And let's go down through it.
16 Colorado maintain gages on the Rio Grande at Del
17 Norte, Rio Grande near Conejos near Mogote, Rio Grande
18 at the Colorado/New Mexico state line.

19 MR. HOFFMAN: Continue down. Can't see
20 that on the right-hand line. Enlarge it please.

21 Q. (BY MR. HOFFMAN) Such other stations as may
22 be necessary to comply with the provisions of the
23 Compact and New Mexico is supposed to do the same for
24 a gage at Rio Grande at Buckman, Rio Grande at San
25 Marcial, Rio Grande at the Elephant Butte Reservoir

1 outlet and other stations, et cetera, and then Texas
2 is obligated to provide gaging stations and
3 information at the gaging stations for the period of
4 the Compact -- I got Compact right that time -- at the
5 Rio Grande at Courchesne, at the Rio Grande at
6 Tornillo, and Rio Grande at Fort Quitman and such
7 other gaging stations. And I believe you testified
8 yesterday that because of the depression, they
9 apparently didn't -- you didn't think that they
10 gathered the information, correct?

11 **MS. ATTON:** Your Honor, I'm sorry, just
12 to object. I object to the extent it mischaracterizes
13 the evidence. I also just want to object, and I
14 apologize to Mr. Hoffman, but just so I do get this
15 clear, there are multiple versions of this same
16 exhibit, I think now in the record. Yesterday, we
17 were using US-620, and now, we're using this Texas
18 one. I just ask, and I'm sorry for interrupting, that
19 by the end of this cross-examination, which is clear
20 as to which exhibit version we're using, and ideally
21 only have one in the record.

22 **MR. HOFFMAN:** That's all right with me.

23 **THE WITNESS:** For the record, I don't
24 seem to have either of these in the binders in front
25 of me so I don't have access to the full document in

1 front of me to refer to. I just want to make that
2 clear, as well.

3 **MS. ATTON:** Your Honor, if I may just
4 explain that, that's because this exhibit we're
5 looking at at the screen right now was only produced
6 -- we were only notified about it minutes before
7 Dr. Stevens took the stand this morning so her
8 binders, of course, were already prepared.

9 **JUDGE MELLOY:** All right. I think --
10 okay. Restate your question, Mr. Hoffman. I think we
11 can probably do it without having to look at the
12 exhibit.

13 **MR. HOFFMAN:** All I was concerned about
14 was this portion of the Compact.

15 **Q. (BY MR. HOFFMAN)** You testified yesterday as
16 follows: "Sure, immediately after they signed the
17 truce, we had a fairly major event occur worldwide
18 known as the Great Depression, so all of the best-laid
19 intentions to collect data during this time did not
20 occur and so what they found was they got to 1935.
21 The Compact that they had signed in 1929 was coming to
22 an end, was set to expire, and none of the data that
23 they were hoping to have gathered there had been
24 gathered. At this time, we had a new president,
25 President Roosevelt," et cetera, et cetera. Do you

1 recall that testimony?

2 A. I do, yes.

3 Q. Let's go to US-456, Pages 15 to 16. Let's
4 start on the first page so we can orient ourselves,
5 Page 1. You testified about this document yesterday,
6 correct?

7 A. Yes.

8 Q. This is part of the -- this is minutes of the
9 -- proceedings of the Rio Grande Compact Commission in
10 Santa Fe, New Mexico on December 2nd and
11 December 3rd, 1935, right?

12 A. Yes.

13 Q. Let's go to Page -- let's go to Page 16, I
14 believe. I need to -- go on to the next page.
15 Continue on. I'm trying to find where Dr. Hinderlider
16 --

17 MR. HOFFMAN: I apologize, Your Honor.
18 I can't read this very well, and it's not in front of
19 me either.

20 JUDGE MELLOY: Can you just ask a
21 question? Do you have a question?

22 MR. HOFFMAN: Yeah.

23 Q. (BY MR. HOFFMAN) I mean, this is the
24 proceedings, and they were talking about the agreement
25 or the potential of JI -- of the research committee

1 doing the JIR, and they're sort of negotiating the
2 terms of an agreement between them as to what should
3 be in the JIR; is that correct?

4 A. This is when Barrows and Adams come and
5 present their ideas for it so this is the beginning of
6 that discussion, yes.

7 Q. And you recall in here that Dr. --
8 Mr. Hinderlider told those gentlemen about the
9 extensive data they had collected pursuant to -- to
10 the 1929 contract -- Compact?

11 A. I don't specifically recall that, no, but I
12 -- I over spoke yesterday if I said none of the data
13 because clearly had been data collected, just not
14 everything that they wanted, which is obviously the
15 reason they needed the Rio Grande Joint Investigation.

16 Q. And do you recall in this document that
17 Mr. Clayton was critical of -- of an expansive project
18 and wanted to limit what the JIR included?

19 A. I don't recall that from this particular
20 document until -- unless you're pointing to something,
21 but Mr. Clayton, as I mentioned yesterday in the
22 subsequent letters over the next two months, he and
23 his engineering advisor made clear that -- to the
24 National Resources Committee that they wanted the
25 scope to be limited.

1 **Q.** And they wanted it focused on what they
2 **thought was important, correct?**

3 **A.** I don't recall that language.

4 **Q.** **Look at --**

5 **A.** I mean, I know they wanted to limit it
6 definitely.

7 **MR. HOFFMAN:** Let's look at, I believe
8 it's Texas 202. No. That's not it. That's not it.
9 Pardon me, Your Honor. My exhibit list is missing,
10 and I need it. Here it is. I'm sorry. It's New
11 Mexico 2302. This is the letter Frank Clayton. I
12 apologize. That's not the one I wanted.

13 **JUDGE MELLOY:** Why don't we take five or
14 ten minutes and maybe you can get your exhibits in
15 order, Mr. Hoffman.

16 **MR. HOFFMAN:** Thank you.

17 **JUDGE MELLOY:** So we can maybe be a
18 little bit more efficient. So let's -- let's take a
19 ten-minute break.

20 **MR. HOFFMAN:** Thank you.

21 (Recess.)

22 **JUDGE MELLOY:** All right. You may
23 proceed.

24 **MR. HOFFMAN:** Thank you. I've got to
25 get my witness here. There we go.

1 Q. (BY MR. HOFFMAN) Okay. Do you recognize this
2 as part of the JIR?

3 A. Yes.

4 Q. And you testified concerning this letter
5 yesterday?

6 A. Yes.

7 Q. And it's a letter from Frank Adams and Harlan
8 Barrows to -- to Abel Wolman, chairman of the water
9 resources committee, correct?

10 A. Yes.

11 Q. And the tone of this letter is that
12 Mr. Barrows and -- and Mr. Abrams are sort of proud of
13 what they've done. Do you agree with that?

14 A. Yes, I think so.

15 Q. Let's go to the top of the next page, the
16 first sentence there. Can you read that for us, the
17 first sentence?

18 MR. HOFFMAN: Enlarge it for us, the
19 first whole sentence. There you go.

20 THE WITNESS: I can read it.

21 Q. (BY MR. HOFFMAN) Yes. Can you read it aloud
22 for us?

23 A. "It is our conviction that the report
24 transmitted herewith furnishes a sound factual basis
25 for an apportionment of the waters of the river above

1 Fort Quitman that would be fair and just to each of
2 the states and to its water users dependent on the
3 river."

4 Q. And, in fact, it did -- it did form a sound
5 factual basis for the apportionment, did it not?

6 A. I think with the information that was in it,
7 it provided a lot of information for the Compact, yes.

8 Q. And the Compact commissioners relied on that
9 report, correct?

10 A. They did.

11 Q. Okay. Now, let's go to your Demo Exhibit No.
12 10, I believe, Stevens Demo No. 10. You called this
13 out and talked about the meager data available in the
14 Rincon and Mesilla and El Paso Valleys, correct?

15 A. That's the language that's in the report,
16 yes.

17 Q. And you sort of blamed that on Hill and --
18 and Clayton, right, because they refused to fund
19 groundwater studies, right?

20 MS. ATTON: Objection to the extent it
21 mischaracterizes the expert's testimony.

22 JUDGE MELLOY: Well, I think it's within
23 the scope of cross. Go ahead.

24 A. Yes. The -- the record shows that Texas
25 tried to keep the groundwater investigation much more

1 narrowly focused, and the letter between Hill and
2 Clayton and Clayton and the National Resources
3 Committee demonstrate that Texas -- that that was
4 Texas' position with regard to groundwater study for
5 the Rio Grande Joint Investigation.

6 Q. (BY MR. HOFFMAN) And your point besides that
7 with respect to this citation is that -- is that --
8 that the reliance that the commissioners placed upon
9 the groundwater study in the Joint Investigation
10 Report was unfounded?

11 A. I'm not sure that I followed the trail of
12 that question, but I will say that they did rely on
13 the report, and the report says that the data in these
14 three valleys, which is downstream of the Elephant
15 Butte Dam, is meager.

16 Q. And the groundwater section of this report
17 was prepared under the direction of C.V. Theis, was it
18 not?

19 A. He was involved, yes.

20 Q. And he's a famous groundwater
21 hydro-geologist, correct?

22 A. He is today. He wasn't in 1937.

23 Q. But in 1935, he formulated his opinions, or
24 at least his formula, with respect to the interaction
25 of groundwater and surface water and depletions?

1 **MS. ATTON:** I object to the extent this
2 seeks any expert testimony outside the scope of an
3 expert historian.

4 **JUDGE MELLOY:** Well, it just asking for
5 a fact, if whether he formulated a formula so I don't
6 think that's expert testimony, if -- if the witness
7 knows.

8 A. So I actually can't recall exactly what his
9 work was in the '30s. I do recall, and I believe it's
10 in my rebuttal report, that his materials were not
11 widely disseminated and that they were sort of
12 published in -- in pretty low distribution channels at
13 that point, but I don't recall exactly when he came up
14 with his formulas. I absolutely concede he became a
15 very well-known groundwater specialist.

16 **Q. (BY MR. HOFFMAN) Okay.**

17 A. What he did by 1935, I can't recall.

18 **MR. HOFFMAN:** Could you put up Texas 29,
19 please? And I would like you to turn to Page 12 and
20 13 of the report. You're on Page 30 and 31. I'm
21 sorry. I can't see the page numbers. Page 12. Okay.
22 Is that the page on the exhibit or is it the page on
23 the document? That is the page on the document.
24 Okay.

25 **JUDGE MELLOY:** Just a second. This is

1 why I'm afraid the record is going to get confusing.
2 Use the exhibit number, Texas dash 0029, Page 14 of
3 56. Is that the page we want to be on?

4 **MR. HOFFMAN:** Yes, it is, Your Honor.

5 **JUDGE MELLOY:** Okay. Go ahead.

6 **Q. (BY MR. HOFFMAN) Do you recall reading**
7 **Dr. Miltenberger's rebuttal report?**

8 A. I did read it. I haven't reviewed it very
9 closely in recent days, but is there a particular part
10 you want me to look at?

11 **Q. Yes. At the bottom of the page, 14 of 56,**
12 **the pioneering work, do you want to read that? You**
13 **don't have to read it aloud, but --**

14 **MR. HOFFMAN:** Could you highlight the
15 last paragraph on that, other than the footnotes up
16 above? There you go.

17 A. Now, I can't read it.

18 **MR. HOFFMAN:** Enlarge, "The pioneering
19 work of Bryan," not the footnotes. That right there.
20 And then continues on the paragraph of the next page.

21 **Q. (BY MR. HOFFMAN) You can read it to yourself**
22 **if you want. Talks about C.V. Theis and who he was**
23 **and -- and when his -- his first published --**

24 A. I see it, yes.

25 **Q. Yes. And it was first published in '35 and**

1 then reprinted in the '50s or '40s? '50s?

2 A. Doesn't say anything about that here, but I
3 know that he was a well-known groundwater hydrologist.

4 Q. So in 1935, when he was advising the -- or
5 actually supervising the work on the groundwater
6 information, he already come out with his -- his
7 theory, correct?

8 MS. ATTON: Objection; foundation.

9 JUDGE MELLOY: Well, I'm going to
10 sustain that. As I understand, this witness doesn't
11 know what he came on with this theory.

12 Q. (BY MR. HOFFMAN) You didn't object -- or
13 comment on Mr. -- Dr. Miltenberger's analysis of
14 Dr. -- of Mr. C.V. Theis' work, did you, in your
15 rebuttal report?

16 A. I -- I did actually comment specifically on
17 Mr. Theis. I don't recall exactly where, but there is
18 a passage where I do talk about Mr. Theis, and I don't
19 recall if it's in my rebuttal report or one of the
20 declarations, but I -- I did. I looked at it, and I
21 looked at exactly where his materials were published
22 and something about if I remember correctly that he
23 was recommended by a mentor to publish it in some
24 other thing. I don't remember all the details, but I
25 do address it, absolutely, in one of my submissions in

1 this case.

2 Q. The joint investigation report wasn't the
3 only place -- only entity or person that we've -- a
4 report that we've talked about today that C.V. Theis
5 was cited for support for, wasn't -- do you agree with
6 that?

7 A. I didn't understand the question.

8 Q. Okay. Did you -- are you aware that the
9 Conover report of 1954 also relied on C.V. Theis and
10 his work at the -- in the JIR?

11 MS. ATTON: Objection; foundation.

12 A. I know that Mr. Theis --

13 JUDGE MELLOY: Just a second. Just a
14 second.

15 THE WITNESS: Apologies.

16 JUDGE MELLOY: Overruled. If the
17 witness knows. She's read the Conover report so go
18 ahead.

19 A. So I know that the Conover preliminary
20 memorandum was transmitted with a letter from Theis.
21 I don't recall seeing anything in the Conover
22 documents that indicated it relied on the JIR, which I
23 think is what you just asked me.

24 Q. (BY MR. HOFFMAN) Correct.

25 A. I don't recall that specifically.

1 **Q.** Let's look at Joint 444, please, and go to
2 **Page --**

3 **MR. HOFFMAN:** And I apologize, Your
4 Honor. When I get there, I'll correct the record.
5 But of the report, it's Page 135.

6 **A.** Can you clarify for me, do you mean 444? Are
7 we looking at the --

8 **Q.** **(BY MR. HOFFMAN)** No, I meant 444.

9 **A.** That's what I thought you said. Okay.

10 **Q.** **Yeah.** This is the letter you talked about?

11 **A.** Yes.

12 **Q.** Okay. Let's go to Page 135 of the report. I
13 will correct you.

14 **MR. RUDLING:** I'm sorry. This does not have
15 a 135 that I'm aware of?

16 **MR. HOFFMAN:** Joint 444 does not have a
17 135? It just has one page?

18 **MR. RUDLING:** No, sir, it has multiple
19 pages. It has 28 pages to be precise.

20 **MR. HOFFMAN:** That's not the -- no,
21 that's -- that's not the right one. Just a second.
22 New Mexico 499. There.

23 **Q.** **(BY MR. HOFFMAN)** That's the 1954 report,
24 **correct?**

25 **A.** Yes.

1 **MR. HOFFMAN:** And if you would go to
2 Page 135 of that report. There you go. And it's Page
3 141 of the document.

4 **Q. (BY MR. HOFFMAN)** It cites, "Literature
5 cited." Do you see that?

6 A. Yes.

7 **Q.** And it cites Kirk Bryan, 1938, a geologist
8 and Rio Grande Joint Investigation in the upper Rio
9 Grande Basin in Colorado, New Mexico, and Texas 1936
10 to '37, Volume 1, Pages 197 through 225.

11 A. Right. And if I recall correctly, that part
12 of the Joint Investigation Report is on the
13 groundwater, which deals specifically with the areas
14 above Elephant Butte.

15 **Q.** And it's the geology, correct?

16 A. I'd have to look at it again. I think that's
17 right, yes.

18 **Q.** Okay. Let's -- let's turn to the next page,
19 142?

20 **MS. ATTON:** Your Honor, I apologize.
21 Just to make sure the record is clear, I'm not sure
22 the court reporter was able to capture everything
23 Dr. Jennifer Stevens said then.

24 **JUDGE MELLOY:** Just a second here. Let
25 me look at the transcript. I think she got it. Go

1 ahead.

2 Q. (BY MR. HOFFMAN) Okay. Let's enlarge the
3 first entry there for C.V. Theis, and you can see
4 there that under C.V. Theis, there's a date for 1935
5 for one of his papers, and then with respect to 1938,
6 he cites the JIR, Pages 268 through 291, as a source
7 that he's relying on for the 1954 Conover report,
8 correct?

9 A. Yes. He's citing to the section that is
10 labeled groundwater in the Middle Rio Grande Valley in
11 New Mexico, which is, of course, above Elephant Butte
12 Dam.

13 Q. Let's go to that section of the report,
14 Colorado 5.

15 JUDGE MELLOY: I think it's actually
16 Colorado 4 if you're talking about the JIR.

17 MR. HOFFMAN: Colorado 4. I'm sorry.
18 Colorado 4. The cited pages were 68 to 91.

19 MR. RUDLING: Could you repeat the page
20 number, please?

21 MR. HOFFMAN: Yeah, I'm trying to find
22 it.

23 JUDGE MELLOY: What is your question,
24 Mr. Hoffman?

25 MR. HOFFMAN: I want to look to see

1 what, in fact, was -- the record is clear that
2 somewhat relied on Theis in the --

3 **JUDGE MELLOY:** Well, 268 is part Roman
4 Numeral 2, Section 3, dash Groundwater in the Middle
5 Rio Grande Valley, New Mexico.

6 **MR. HOFFMAN:** Correct. Okay. Okay.
7 Let's go to Texas Exhibit 610. This is the report in
8 1962 by Gunaji.

9 A. Yes. The date on it is November, 1961.

10 **Q. Did you collect this document?**

11 A. I did. I believe so. Although I can't
12 recall off the top of my head.

13 **Q. Do you know where you collected it?**

14 A. No.

15 **MS. ATTON:** Your Honor, I apologize.
16 Just to be clear, this is a Texas version of this
17 document, and just so we're clear that there was a New
18 Mexico version, as well, but that is not the version
19 that has been entered into evidence.

20 **JUDGE MELLOY:** Excuse me. Which version
21 is in evidence? Is it the New Mexico or the Texas?

22 **MS. ATTON:** I believe it's the Texas
23 exhibit we have on the screen, but just for clarity,
24 Dr. Stevens may not have personally collected this
25 Texas exhibit version.

1 **JUDGE MELLOY:** What I'm asking is, is
2 this in evidence as Texas 610 or is it in evidence as
3 a New Mexico exhibit? Or is it in evidence at all?

4 **MR. HOFFMAN:** It's in evidence.

5 **JUDGE MELLOY:** Do you know what the New
6 Mexico exhibit number is?

7 **MR. HOFFMAN:** Yes, I do. 445.

8 **JUDGE MELLOY:** Go ahead.

9 **MR. HOFFMAN:** I guess I'm wrong on that
10 one. I'm sorry. It's not 445.

11 **MS. ATTON:** So, Your Honor, I believe
12 the Texas 610 exhibit, which is on the screen right
13 now, is the admitted version in this case.

14 **JUDGE MELLOY:** All right. Okay. Let's
15 go ahead.

16 **Q. (BY MR. HOFFMAN)** Okay. You called out
17 certain pages of this exhibit, and I'm trying to find
18 out which ones. I'll find it. You talked about how
19 the groundwater levels had recovered. Do you recall
20 that? They hadn't completely recovered, had they?

21 **A.** No, not entirely. They -- he says that they
22 were still 2 feet lower than before the drought had
23 started, if I remember correctly.

24 **Q.** Do you know how long it would take for them
25 to recover completely?

1 A. Do I know?

2 Q. Yeah.

3 A. No, I don't.

4 Q. You don't? You're not a technical expert,
5 are you?

6 A. No, I'm not.

7 Q. So we'll have to leave it to the technical
8 experts to testify as to how long it would take for
9 the groundwater levels to recover completely?

10 A. Right. I was reading this report into the
11 record because of the difference that he, which who is
12 a technical expert, stated it would take, which was a
13 difference than the earlier technical expert, Conover,
14 had said it would take.

15 Q. Do you know if Mr. Gunaji studied the -- the
16 effect of groundwater pumping on reservoir levels?

17 A. I don't recall.

18 Q. As a layman, where do you think the water
19 came from to allow the groundwater levels to recover?

20 MS. ATTON: Objection. This calls for
21 expert testimony outside the scope of Dr. Stevens'
22 expertise.

23 JUDGE MELLOY: Well, I'll let
24 Dr. Stevens answer to the extent that she has reviewed
25 reports or other documents in her historical analysis

1 that might shed light on that issue.

2 A. Sure. So that's exactly what I can speak to,
3 and my recollection is that there were different
4 reports in different parts of the basin from Colorado
5 all the way down to -- to Fort Quitman that describe
6 different sources for the groundwater. Some of it was
7 from the stream; some of it was from precipitation;
8 some of it was from Mesa lands, if I remember
9 correctly, and I can't remember all of the other ones,
10 but I do know that there were several reports that,
11 over the course of time, that talked about where that
12 water came from, and it came from different places and
13 was known at different times.

14 Q. (BY MR. HOFFMAN) Would you agree with me that
15 the major source of the water that replaced it would
16 be the river?

17 MS. ATTON: Objection on the basis it
18 asks for technical expertise.

19 JUDGE MELLOY: If you can answer, go
20 ahead.

21 A. I would ask you to define for me where
22 specifically in the basin and when. When they knew,
23 when you're asking me about their knowledge, just
24 generally, because I think what I said in my report is
25 that it depended and that the different basins were

1 different, and the knowledge of --

2 Q. (BY MR. HOFFMAN) I'm asking you about your --
3 your personal opinion with respect to the Mesilla
4 Valley. Where do you think the water came from that
5 Gunaji was talking about that refilled the aquifer to
6 2 feet below the prior to groundwater-pumping levels?

7 A. That's a specific question I can answer. He
8 says the river. Most of it came from the river.

9 Q. Okay. And -- I'll leave that to the
10 technical experts. Okay. You talked about how
11 certain people or certain information was more or less
12 reliable depending on the distance from the event that
13 they were describing. Do you recall that? And
14 distance I mean in years.

15 A. Right. I said something along those lines,
16 yes.

17 Q. Yeah. And then you talked about Mr. Reynolds
18 and -- and said that -- what was your criticism of
19 Mr. Reynolds' testimony? I can't remember.

20 A. I wouldn't characterize it as criticism. I
21 think what I said was that he was not present during
22 the Compact negotiations, and he became state engineer
23 in 1955.

24 Q. And, in fact, Mr. Hill, who did his affidavit
25 in 1968, was, in fact, present during the

1 negotiations, was he not?

2 A. I don't recall that Hill did that. I mean,
3 I'll take your word for it, but -- and if you're
4 talking about Raymond Hill, then, yes, he was present
5 there for the negotiations, but I don't remember those
6 together.

7 Q. He was engineering advisor to Clayton,
8 correct?

9 A. Yes.

10 Q. And he was -- his name is all over the
11 reports of the engineer advisors, right?

12 MS. ATTON: Objection; foundation.

13 JUDGE MELLOY: She's indicated she's
14 read the report, so I'll let her answer.

15 A. I lost the -- the question. You asked if
16 Hill's name is all over the engineering advisor's
17 reports from --

18 Q. (BY MR. HOFFMAN) Yeah. He signed every one
19 of them, correct?

20 A. Absolutely, yeah. He was very involved.

21 Q. Okay. And he would be in a better position
22 than you to be able to tell us what the contract --
23 contact -- Compact commissioners intended, would he
24 not?

25 A. Well, I'm not sure that I'm comparing my

1 ability to -- I mean, I think I was just simply
2 commenting that when 30 years have passed and the
3 amount of information has changed since the '30s, that
4 what he says in 1968, you need to take it as -- you
5 have to put it in that context and understand that he
6 was talking about it 30 years later and so I have to
7 weigh that as a historian against all of the documents
8 that his name was all over, you're right, in the '30s,
9 and ascertain sort of how to weigh his opinions and
10 what he says about the '30s versus what he did in the
11 '30s. So I guess I'll leave it at that.

12 **Q. Well, how much weight did you give to his**
13 **opinions in 1968?**

14 A. I don't think I really used that document at
15 all, if I remember correctly. I'd have to go back --

16 **Q. So you gave it no weight?**

17 A. I don't think that it was a document I spent
18 a lot of time focusing on to analyze the questions I
19 was asked to investigate.

20 **Q. So the answer to my question is you gave it**
21 **no weight; isn't that right?**

22 A. Well, I certainly looked at it since then.
23 No, I wouldn't agree with that. I think that's too
24 stark of a statement, but I've already answered the
25 question and explained how I view documents and how I

1 do my historical methodology and why I look at '68, in
2 this particular matter, different than documents from
3 the '30s.

4 **MR. HOFFMAN:** Okay. I'm going to turn
5 you over to Ms. Coleman. I'm through, Your Honor.

6 **JUDGE MELLOY:** Thank you, Mr. Hoffman.
7 Ms. Coleman, you may proceed.

8 CROSS-EXAMINATION

9 BY MS. COLEMAN:

10 Q. Good afternoon, Dr. Stevens. I'm sorry. I
11 was taken off guard there for a minute. Also, it's
12 freezing cold in this room so I'm a little shivery.
13 It has nothing to do with this. They're trying to get
14 me tea. All right. So I wanted to start by talking
15 about your historic -- some of your professional
16 experience, and yesterday your updated CV was admitted
17 as an exhibit. Do you remember that?

18 A. Yes.

19 **MS. COLEMAN:** Actually, just as an
20 advance comment for all involved, we're going to look
21 at the CV, but we're going to spend a good bit of time
22 with your two reports so you might want to just have
23 those handy as we go.

24 Q. (BY MS. COLEMAN) Starting with the CV, so
25 this is -- this is an updated CV that you produced

1 this summer, correct?

2 A. Yes, I believe so.

3 Q. Or earlier this year?

4 A. Yes.

5 Q. Okay. So we -- we're going to pull up New
6 Mexico Exhibit 1508. So there it is. And let's go to
7 Page 2. And you'll see the first entry under water
8 rights slash irrigation there, expert historian for
9 principal defendants in the Walker River matter. This
10 is a matter involving the Walker River rights Nevada?

11 A. It is.

12 Q. Is one of your assignments in that case to
13 prepare a report rebutting the historian's report
14 submitted by the United States?

15 A. It is.

16 Q. Has your rebuttal report been submitted in
17 that matter?

18 A. It has not.

19 Q. Can you tell us why?

20 A. Can we just blame everything on COVID? The
21 national archives unfortunately have been inaccessible
22 for 18 months, and I have not been able to access a
23 large number of records that I need to look at to
24 render opinions in that matter.

25 Q. Let's go to Page 4 of your C V. When I say

1 4, I mean of the exhibit. We see at the bottom there,
2 there's a heading for R.S. 2477, road right of way
3 1866 Mining Act. Now, Dr. Stevens, you're not a
4 lawyer, as we've established, correct?

5 A. I'm not.

6 Q. Okay. But in the course of your work, you've
7 become familiar with certain legal concepts, correct?

8 A. As a layperson, yes.

9 Q. Okay. Can you just tell us briefly what R.S.
10 2477 refers to?

11 MS. ATTON: Objection; relevance.

12 MS. COLEMAN: Can I have a few more
13 questions to get to the relevance?

14 JUDGE MELLOY: You may.

15 Q. (BY MS. COLEMAN) Can you tell us briefly what
16 R.S. 2477 is?

17 A. Sure. I'll try. I'm certainly not prepared
18 to talk about this, but I'll give it a shot. R.S.
19 2477 is a statute in the 1866 Mining Act that provides
20 for actual right of ways over public lands not
21 reserved for other purposes. It was part of the law
22 that was passed in the 1860s that was also intended to
23 settle parts of the country that were not settled at
24 the time and so it provided rights for roads and
25 ditches.

1 Q. In the course of your work on R.S. 2477, you
2 addressed the question of prescriptive easements?

3 A. Not -- not really directly, no.

4 Q. Have you heard of the concept of
5 prescription?

6 A. I have.

7 Q. Are you offering any opinion about
8 prescription today?

9 A. No.

10 Q. Thank you. Let's go to Page 5, and we'll
11 look at the second entry on Page 5, 2015 to 2019,
12 consulting historian for consortium of counties in
13 North Dakota. Do you see that?

14 A. Yes.

15 Q. This is the case in North Dakota that you
16 mentioned yesterday; is that right?

17 A. Yes.

18 Q. I see at the bottom of that entry, you
19 referenced trial testimony in November, 2019, three
20 days of trial testimony; is that right?

21 A. That's my recollection, yes.

22 Q. And that was approximately three weeks after
23 your expert report in this matter, your first expert
24 report?

25 A. Which was October, 2019. I don't recall the

1 exact amount of weeks between them, but obviously a
2 month later, within a month.

3 Q. And your testimony in that case was offered
4 by a party opposing the United States, correct?

5 A. I'm sorry. Can you repeat that?

6 Q. Yes. Your expert testimony in that case was
7 offered by a party opposing the United States,
8 correct?

9 MS. ATTON: Objection; relevance.

10 JUDGE MELLODY: I'll overrule it. You
11 may answer.

12 A. Yes.

13 Q. (BY MS. COLEMAN) And scrolling -- not
14 scrolling down, but later on the same page under
15 CERCLA/Superfund, that first entry there, "2020 to
16 present, expert historian for confidential client in
17 the Silverton, Colorado region," do you see that?

18 A. Yes.

19 Q. And your client, I understand, is no longer
20 confidential in that matter; is that correct?

21 A. I believe that's true, yes.

22 Q. Okay. So this entry is referring to your
23 work for the Sunnyside Gold Corporation in the Gold
24 King Mine case, correct?

25 A. Yes.

1 MS. ATTON: Objection; relevance.

2 MS. COLEMAN: We are getting there.

3 JUDGE MELLOY: Okay. Go ahead.

4 Q. (BY MS. COLEMAN) And notwithstanding the
5 closure of the archives, you produced your expert
6 report in that case earlier this year, correct?

7 A. That's true. I did produce the report this
8 year and traveled to several archives for that matter
9 that were not closed.

10 Q. And is it fair to characterize -- sorry. Let
11 me withdraw that.

12 And is your report and expert testimony in
13 the Gold King Mine case being offered by a party
14 opponent to the United States?

15 A. I haven't offered any expert testimony in
16 that matter yet and, yes, my understanding is that
17 they are opposed to the United States.

18 Q. Thank you. So still just in the realm of
19 your experience, you spoke earlier about the history
20 of memory being its own field; do you remember that?

21 A. Yes.

22 Q. Are you aware of the field of the history of
23 science?

24 A. Yes, of course.

25 Q. Do you have training in the history of

1 science?

2 A. No, not specifically.

3 Q. Does that field have its own methods of
4 research?

5 MS. ATTON: Objection; relevance.

6 JUDGE MELLOY: Overruled. Go ahead.

7 A. I don't know.

8 Q. (BY MS. COLEMAN) Okay. But you're not
9 testifying today as an expert in the history of
10 science, are you?

11 A. Not specifically, no, not in the way that
12 that term is understood in the historical profession.

13 Q. Okay. Thank you. Okay. Turning to this
14 litigation, so you were retained by the State of New
15 Mexico in this matter in 2013; is that right?

16 A. I believe it was 2013, yes.

17 Q. Okay. Or around 2013. And when you were
18 retained, were you aware that there was an ongoing
19 state adjudication of the Lower Rio Grande Basin?

20 A. I don't recall. I don't know.

21 Q. Were you aware at that time of any other
22 ongoing litigation involving the Rio Grande Project?

23 A. Not that I remember, no.

24 Q. Okay. So in that case, you hadn't submitted
25 reports in any other matter for New Mexico involving

1 the Lower Rio Grande, correct?

2 A. Correct.

3 Q. Now, returning to this action, are you aware
4 that New Mexico moved to dismiss the complaints of
5 Texas and the United States in 2014?

6 A. I'm sure I was aware at some point about
7 that, yes, but I don't recall specifically.

8 Q. Okay. And I believe you testified at your
9 deposition that around the time you were retained, you
10 worked with attorneys at the New Mexico Attorney
11 General's Office to discuss your assignment; do you
12 remember that testimony?

13 A. Not specifically, but that's true, yes.

14 Q. Okay. And you testified yesterday that you
15 were given a large set of materials to review at the
16 time you were retained; do you remember that?

17 A. Yes.

18 Q. Do you recall how those materials were
19 provided to you, electronically, for example?

20 A. I can't remember exactly at the start how the
21 materials were provided. I -- I went to New Mexico
22 several times over the course of the last seven years,
23 and there were boxes of materials that the State
24 Engineer had. I think at some point, those were --
25 some of them at least were digitized and have been

1 produced herein, but I can't remember exactly how I
2 accessed that material right off the -- off the bat
3 seven or eight years ago. I don't recall.

4 **Q. I understand. Okay. But do you know how**
5 **those materials were collected?**

6 A. I don't know about all of them, no, but I was
7 -- it was clear to me that some of them had been
8 collected by Doug Littlefield, merely because I worked
9 for him, and I knew his handwriting, so I can see his
10 handwriting, and, in fact, I think even some of the
11 exhibits in the trial today have his name typed on the
12 front of a request, a photocopy request for some of
13 these materials so I think that some of them had been
14 collected by him over the years, but that's pure
15 conjecture. I don't know that for a fact.

16 **Q. So let's go to your October, 2019, report,**
17 **and we'll go to Page 8. We'll look at those three**
18 **bullets there under -- actually, we're going to look**
19 **at the full version under Methodology and Materials**
20 **Consulted. Do you see that?**

21 A. Yes.

22 **Q. Okay. Do you recall Dr. Miltenberger's**
23 **testimony, I believe, his assignment was to look at**
24 **the meaning of the 1938 Compact more or less?**

25 A. I believe so, yes.

1 Q. Was your assignment broader than that?

2 A. I would say so, yes.

3 Q. Okay. And looking specifically at that
4 second bullet there, it says, "How did officials
5 manage groundwater, and what connections did they make
6 between groundwater use and Project surface water?"
7 Do you see that?

8 A. Yes.

9 Q. Okay. Was -- so was part of your assignment
10 under that question to reconstruct the historical
11 record of the scientific understanding of the
12 relationship between surface water and groundwater?

13 A. Yes. I think that's accurate.

14 Q. Okay. Now, looking at the -- the text there
15 underneath the bullet points, you said you began by
16 reviewing materials provided to me by counsel, all of
17 which can be found at the New Mexico Office of the
18 State Engineer, parenthesis, NM OSE, close
19 parenthesis, library. Do you see that?

20 A. Yes.

21 Q. Did you ever visit the OSE library?

22 A. Yes.

23 Q. And actually, for the benefit of the record,
24 we're going to use OSE to refer to the Office of the
25 State Engineer, if that's okay with you.

1 A. Sure. Yeah, of course.

2 Q. Okay. So throughout your first report, you
3 put the notation NM OSE library in some of your
4 footnotes. Do you remember that?

5 A. I'm sure that's true, yes.

6 Q. Okay. So it's not possible to tell then from
7 the citation saying that whether you got the document
8 from counsel or whether you got it from the library
9 directly?

10 A. That's true, yes. That's accurate.

11 Q. Okay. So let us go to Page 94 of this first
12 report, and we'll look just down at the footnotes.
13 Using Footnote 113, just as an example, we see you're
14 referring to a water announcement by L.R. Fiock, and
15 you provide the citation, and at the end it says, "NM
16 OSE library." Do you see that?

17 A. I do, yes.

18 Q. Do you recall -- do you see it refers to the
19 water announcement as located within a Project history
20 for the calendar year 1951, correct?

21 A. Yes.

22 Q. Okay. Does that mean in your work on this
23 report that you were looking at a complete volume of
24 the Project history?

25 A. So my recollection is that the Project

1 histories are all microfilmed, and they're microfilmed
2 in for whatever reason 60-page chunks so, yes, I
3 reviewed the entirety of all the Project histories up
4 until approximately 1960.

5 **Q. Until approximately 1960, you say?**

6 A. Approximately. Through the '60s. I can't
7 remember exactly when the date the last one was that I
8 examined, but around 1960 or thereabouts, maybe the
9 middle of the '60s.

10 **Q. Okay. And you hadn't conducted that review**
11 **prior to this first report?**

12 A. I had or had not? I'm sorry. What was the
13 question?

14 **Q. Had you completed your review of all of the**
15 **Project histories up to approximately 1960 at the time**
16 **you had -- you submitted this first report?**

17 A. I believe so. I'd have to go back and
18 reconstruct, but I think I did, yeah.

19 **Q. So you spoke a little bit with Ms. Atton**
20 **about what a Project history is. Do you remember**
21 **that?**

22 A. Yes.

23 **Q. And these are voluminous volumes, for lack of**
24 **a better word, correct?**

25 A. Yes.

1 Q. Okay. And even broken into 60-page chunks,
2 they total well over a hundred pages sometimes, right?

3 A. Yes.

4 Q. Okay. And as we've seen today, the Project
5 histories for the Rio Grande Project also contain some
6 documents called water announcements; is that right?

7 A. Yes.

8 Q. Okay. And you spoke earlier with Ms. Atton
9 about what a water announcement is, and you said these
10 went -- these went to the farmers, right?

11 A. I -- I do think -- I think that's what I
12 said. I can't recall exactly, but I know that the
13 information was provided to farmers in some way,
14 shape, or form. How that got transmitted to them, I
15 don't know.

16 Q. So you don't actually know who received these
17 water announcements, do you?

18 A. I think it was the districts that received
19 the water announcements, if I'm not mistaken, and then
20 it was disseminated to the farmers.

21 Q. And do you have documents -- are there
22 documents cited anywhere that describe that process?

23 A. No. That's just my recollection from looking
24 at a lot of Reclamation histories over time as how
25 that -- that that's how that was done, but I don't --

1 can't point to any specific document saying that.

2 Q. Okay. And notwithstanding differing views
3 about the value of newspapers, did you check
4 newspapers to see if the water announcements were
5 published there?

6 A. I did -- I did look at newspapers, and water
7 announcements were frequently published there on many
8 projects throughout the west. If you look back at
9 Page 8 of my report, it's clear that I did look at
10 newspapers through a subscription to newspapers.com.
11 I don't recall specifically whether or not the water
12 announcements were published there. I didn't look
13 specifically for that.

14 Q. Okay. So I know you've cited a number of
15 newspapers, but you're not citing them for the
16 proposition that the water announcements were
17 published there, correct?

18 A. No.

19 Q. Okay. Thank you. You also address the water
20 announcements in your rebuttal report, correct?

21 A. I believe so.

22 Q. And your rebuttal report was submitted in
23 June of 2020, right?

24 A. Yes.

25 Q. And is responding to Dr. Miltenberger's

1 report of December, 2019, right?

2 A. Yes.

3 Q. And it did not respond to the report
4 submitted by Mr. Kryloff, correct?

5 A. Correct.

6 Q. Now, between December, 2019, and June, 2020,
7 we were -- we went into the pandemic mode. Did that
8 affect your ability to conduct research for your
9 rebuttal report?

10 A. I don't recall that being -- having an impact
11 on my ability to do my rebuttal report, no.

12 Q. Okay. Let us get your rebuttal report open
13 then. It's New Mexico Exhibit 2098, Page 19 of that
14 document. We will, again, go to the footnotes, and
15 let's take a look at Footnote 100. So this is the
16 stream citation, as lawyers call it, water
17 announcements -- or it's one of the stream citations
18 of water announcements here. Let's see. And in this
19 case, for these ones, you're not citing the OSE
20 library as the location of the document, right?

21 A. I don't appear to have that in here, no.

22 Q. Okay. Were you looking at a different set of
23 water announcements?

24 A. I cannot be sure based on this. We use a
25 citation tool called Zotero, and for whatever reason

1 it's not in here, and I don't know why, so I can't --
2 I can't answer that just by looking at this. I'd have
3 to go back and reconstruct on the computer so I'm
4 sorry to say I can't tell you.

5 Q. That's okay. So you see there in Footnote
6 100, there's a reference to the water announcements
7 from April 7th, 1952, which I believe you looked at
8 with Ms. Atton earlier. Do you see that?

9 A. Yes.

10 Q. Okay. Let's pull up New Mexico Exhibit 1446.
11 It says at the top there April 7th, 1952, water
12 announcement, and this is -- what we're looking at
13 here is the version that you used, correct?

14 A. I believe so, yes.

15 Q. Okay. And you see that legend on the left
16 there?

17 A. I was just going to say, it may have come
18 from the EBID collection at New Mexico State.

19 Q. But you see there's also an EBID Bates stamp
20 there on the bottom right?

21 A. Yes.

22 Q. Okay. Does that -- what does that signify to
23 you?

24 A. It could mean anything. It could be
25 litigation that they were involved in and that that's

1 how they stamped it. There's also two other Bates
2 stamps on there that start with NM and NM2, so I have
3 no idea what the EBID stamp means here.

4 **Q. Okay. Was this document provided to you by**
5 **counsel?**

6 A. I can't recall. I went to New Mexico State
7 and did research in the EBID collection, so I --
8 again, without my computer in front of me and the
9 ability to go back and look since we don't -- I don't
10 have it in this footnote, which is a mistake, I can't
11 tell you. I don't know.

12 **Q. Okay. All right.**

13 **JUDGE MELLOY:** Ms. Coleman, maybe this
14 will be a time to take a break. Why don't we -- why
15 don't we break for 15 minutes, and then we'll come
16 back. All right, everyone? Thank you.

17 **MS. COLEMAN:** Thank you.

18 **THE WITNESS:** Thank you.

19 (Recess.)

20 **JUDGE MELLOY:** All right. Are we ready
21 to resume?

22 **MS. ATTON:** We are. But, Your Honor, if
23 I may just before we start, I apologize. We have a
24 restriction on Dr. Stevens' time today. We didn't
25 expect to be an issue. After court ends today,

1 Dr. Stevens has to catch a flight for personal family
2 reasons, and she's not able to come back tomorrow. I
3 don't know if that's going to be an issue with the
4 U.S.'s cross-examination of Dr. Stevens today, but I
5 just wanted to flag it at this point.

6 **JUDGE MELLOY:** How much time do you
7 think you'll need, Ms. Coleman?

8 **MS. COLEMAN:** It is possible that I will
9 go to the end of the day. I can't say. I'm not good
10 at estimating this.

11 **JUDGE MELLOY:** Let's see where we're at.
12 Let's go, and we'll see how far we get. And I don't
13 mind going a little late if it's -- if -- if Heather
14 is up for it. I'm always concerned about -- I don't
15 want to overtax the court reporter, but the lawyers I
16 don't worry about so much. But go ahead. Go ahead.

17 **Q. (BY MS. COLEMAN)** All right. Moving right
18 along then -- or, actually, moving back to Page 19 of
19 your rebuttal report, we're going to go to the text
20 that's above the footnote. Okay. We see there, "The
21 federal agency continued such encouragement throughout
22 the 1952, 1953, 1954, and 1955 irrigation seasons."
23 Do you see that?

24 **A.** Yes.

25 **Q.** Okay. And so you're saying here that

1 Reclamation encouraged groundwater pumping in each
2 irrigation season, 1952 to 1955?

3 A. Yes. That's my recollection.

4 Q. Okay. Let's look at Footnote 100. Can you
5 tell me looking here what you cited as evidence that
6 Reclamation encouraged groundwater pumping in 1953?

7 A. It's not in the footnote, but I presumably
8 looked at the water announcement for those -- for that
9 year, the water announcements for that year.

10 Q. Is it standard historical practice not to put
11 the citation in for something you are asserting?

12 A. No. Clearly it's an error.

13 Q. Okay. Thank you. So you wouldn't agree with
14 me then that there is no water announcement from 1953
15 that encourages pumping?

16 A. Can you rephrase that?

17 Q. Yes. Thank you for asking me to. To your
18 recollection, is there any water announcement from
19 1953 that encourages groundwater pumping?

20 A. I cannot recall off the top of my head, other
21 than the documents that we've been looking at for the
22 last two days, and I can't recall if any of those were
23 from '53.

24 Q. Okay. We can revisit that soon. Let's look
25 back at Footnote 100. Can you tell me what you've

1 cited as evidence that Reclamation encouraged
2 groundwater pumping in the year 1955?

3 A. Same answer.

4 Q. Okay. For the benefit of saving time, I'll
5 represent that on the next page, you cite a statement
6 from the Elephant Butte Irrigation District Board of
7 Directors from 1955, but as far as I can see, nothing
8 from Reclamation. So to your -- sitting here today,
9 you cannot think of a water announcement from 1955
10 that encouraged pumping?

11 A. Other than the ones that we've brought up as
12 evidence in the exhibits in the last couple days, and
13 I -- I can't recall off the top of my head what all
14 those dates were, I don't remember any other ones at
15 this time. That doesn't mean they weren't there, but
16 I don't remember what they are.

17 Q. Okay. So by my count, the Project managers
18 -- well, let me back up a second. This is critical to
19 supporting your Rebuttal Opinion 2, is it not?

20 A. When you say "this," can you identify what
21 you --

22 Q. The statement that Reclamation continued such
23 encouragement throughout the 1952, 1953, 1954, and
24 1955 irrigation seasons is a critical fact for your
25 Rebuttal Opinion No. 2, correct?

1 A. So my Rebuttal Opinion No. 2 on Page 15
2 states that, "Reclamation encouraged pumping in order
3 to make irrigation a continued reality and essentially
4 enable the Project to survive." So even if you take
5 out '53 and '55 from Footnote 100 and the sentence to
6 which that adheres, that does not change my opinion as
7 stated in Rebuttal Opinion No. 2, no.

8 **Q. Well, I'm not -- I'm not asking if it changes**
9 **your opinion. I'm asking whether it is a critical**
10 **fact for your opinion.**

11 A. It's a critical fact that Reclamation issued
12 the water announcements that we've been going over
13 that very clearly stated that they're encouraging well
14 owners to -- to use those wells and to transfer their
15 allotments, yes, that's a critical part of my
16 evidence, absolutely.

17 **Q. Okay. And the opinion that you've stated**
18 **there as to statements by the Bureau of Reclamation is**
19 **based solely on, as far as you know, water**
20 **announcements from 1951, 1952, and 1954; is that**
21 **correct?**

22 A. I don't think -- it doesn't change my opinion
23 if we rely -- if I rely only on these three years, if
24 that's what you're asking me.

25 **Q. Again, I'm not asking if that changes your**

1 opinion. I'm asking if that is what your opinion is
2 based on three years of water announcements?

3 A. It's based on the collective historical
4 record related to this, so the documents that we just
5 talked about, the water announcements that we've been
6 looking at the last couple of days, as well as the
7 reconnaissance report in 1956 that acknowledges that
8 Reclamation knew about the pumping and that it was an
9 important critical part of a supplemental water supply
10 in years of shortage. So it's not just those things.
11 It's also the complete historical record that I looked
12 at.

13 Q. Dr. Stevens, can you show me where in your
14 reports you cite the 1956 reconnaissance report for
15 your opinions?

16 A. I don't think that I do.

17 Q. In fact, you didn't review it for your
18 reports, correct?

19 A. I became aware of it in the production for
20 the case after this report was written. That's true.

21 Q. Okay. So, again, your Rebuttal Opinion No. 2
22 is based -- as to Reclamation's statements
23 specifically is based on water announcements from
24 1951, 1952, and 1954, correct?

25 MS. ATTON: Objection; mischaracterizes

1 the witness' testimony.

2 Q. (BY MS. COLEMAN) I would like to know what
3 documents specifically continued such encouragement
4 relates to as it pertains to the Bureau of
5 Reclamation?

6 JUDGE MELLOY: You may answer the
7 question.

8 A. So, yes, it definitely relies on those and
9 that probably, off the top of my head, is the majority
10 of my explanation for that plus the -- well, hang on.
11 Give me just a second. So in that footnote, there's
12 also a statement from the Elephant Butte Irrigation
13 District regarding the water situation from June,
14 1953. I don't have instant recall as to what that
15 says, which I imagine is going to be your next
16 question, but obviously I relied upon that to make
17 that statement.

18 Q. (BY MS. COLEMAN) That will not be my next
19 question. My next question will be is the Elephant
20 Butte Irrigation District the same as the Bureau of
21 Reclamation?

22 A. No, of course not. They're separate
23 entities, but it was a district that received water
24 from a Reclamation project.

25 Q. Okay. So you're done looking through your

1 footnotes for other Reclamation documents on this to
2 support this statement?

3 A. In Footnote 104, I also reference Elephant
4 Butte Irrigation District Board of Directors to all
5 irrigation well owners from 1955. So without having
6 my computer right with me and looking at all those
7 documents right now, I imagine, I think, I am sure,
8 that I relied upon a series of these documents to make
9 that particular part of my opinion.

10 Q. Dr. Stevens, do I understand your opinion to
11 be that the 1700 wells that were drilled in the
12 Project by 1956 can all be attributed to the Bureau of
13 Reclamation's encouragement?

14 A. No. I don't think I ever said that.

15 Q. Let's look at your Rebuttal Opinion 2 on Page
16 15. If we are looking at Rebuttal Opinion 2, which
17 we're pulling up out of order. I'm sorry. "Improving
18 scientific understanding about the groundwater supply
19 in the Mesilla Valley in the post-Compact era led to
20 Reclamation-led conjunctive, parenthesis, joint, close
21 parenthesis, management of the overall supply." So
22 here, you are alleging it is Reclamation-led -- a
23 Reclamation-led movement to supplemental groundwater
24 pumping, correct?

25 A. That's what I said, but that's not what you

1 asked me a second ago so --

2 Q. Okay. Correct. Your opinion is not that
3 Reclamation's encouragement is the reason for 1,700
4 wells being drilled by 1956?

5 A. You asked me if every single one of those
6 wells is attributable to Reclamation, and I think I
7 probably don't know enough about each of those
8 individual wells to say that.

9 Q. Okay. Thank you for that. Let me just take
10 a minute here. Okay. But can we agree at least
11 taking your Footnote 100 at face value that there are
12 no water announcements from after 1955 that encouraged
13 groundwater pumping?

14 A. No, I can't say that. I don't know because I
15 haven't reviewed recently enough to know if there were
16 no announcements in post 1955.

17 Q. But, Dr. Stevens, you said that you reviewed
18 the water announcements up through 1960, correct?

19 A. Yes.

20 Q. It seems to me, and correct me if I'm wrong,
21 that the opinion that the post-Compact era of
22 conjunctive management was led by Reclamation might
23 have alleging to confirm the documentary bases for
24 that opinion prior to testifying today; is that wrong?

25 MS. ATTON: Objection. I'm sorry, Your

1 Honor. I'm not following that question.

2 THE WITNESS: I'm not either.

3 MS. COLEMAN: Neither am I, so great.

4 Q. (BY MS. COLEMAN) Okay. So sitting here
5 today, the documentary bases for your opinion that
6 Reclamation-led conjunctive joint management are water
7 announcements from 1951, 1952, and 1954, correct?

8 A. That's what's cited in my Footnote 100, yes.

9 Q. Okay. Thank you. Now, you also reviewed the
10 complete set of water announcements from 1946 to 1950;
11 is that correct?

12 A. Yes.

13 Q. You haven't cited any water announcements
14 from that era. Should I assume from that, that there
15 must be some that encouraged pumping?

16 MS. ATTON: Your Honor, objection. I
17 think this might be mischaracterizing the expert's
18 testimony.

19 JUDGE MELLOY: Rephrase your question.

20 MS. COLEMAN: Okay.

21 Q. (BY MS. COLEMAN) Sitting here today, are you
22 aware of any water announcements issued by Reclamation
23 between 1946 and 1950 that encouraged groundwater
24 pumping?

25 A. I don't remember.

1 Q. And I believe we covered earlier, you would
2 agree that the opinions stated in your rebuttal report
3 are not based -- did not -- sorry, did not account for
4 that 1951 article in the El Paso Herald -- sorry. Let
5 me withdraw that.

6 Would you agree that your opinions did not
7 address the June 12th, 1951, El Paso Herald Post
8 article that is New Mexico Exhibit 899?

9 A. I don't believe I cited that article, no.

10 Q. All right. Let's go back to Rebuttal Opinion
11 2. All right. So first sentence again, "Improving
12 scientific understanding," et cetera, "Led to
13 Reclamation-led conjunctive, parenthesis, joint
14 management of the overall supply." Do you see that?

15 A. Yes.

16 Q. And is that consistent with the opinion
17 you're offering today and testimony?

18 A. Yes.

19 Q. Okay. Do you define conjunctive use anywhere
20 in your reports?

21 A. Probably not, no.

22 Q. Do you define conjunctive management anywhere
23 in your reports?

24 A. I'm sure I don't, no.

25 Q. Now, you have extensive experience working on

1 matters relating to -- to Reclamation projects,
2 correct?

3 A. Yes.

4 Q. Okay. And -- and as well as general
5 irrigation district matters and such?

6 A. Yes.

7 Q. Is there -- is conjunctive management a term
8 of art for historians?

9 A. I don't really understand the meaning of your
10 question, a term of art for historians, can you maybe
11 phrase it differently so I know what you're asking.

12 Q. You're testifying today as a historian,
13 correct?

14 A. Yes.

15 Q. And you're using the term here conjunctive
16 management. I'm going to read out the word joint in
17 there just for simplicity. You're using the term
18 conjunctive management, and that term is not defined.
19 So I'm asking you as a historian, is there a accepted
20 definition of conjunctive management that historians
21 use?

22 A. I'm quite sure not too many historians talk
23 about conjunctive management, but I -- I mean,
24 certainly what I mean and what I understand it to mean
25 is -- is management of the water supply as one whole

1 the groundwater and the surface water but certainly
2 not a technical expert. That's my understanding of
3 what it is, and that's what I mean here.

4 **Q. When you say "management," who is doing the**
5 **managing?**

6 A. Well, in this case, it's Reclamation on the
7 Rio Grande Project.

8 **Q. So you're saying Reclamation managed surface**
9 **and groundwater supply? Is that what you're saying?**

10 A. No. Probably I'm not saying that. If I
11 think back to historically how this was done and how I
12 understand it to be done, the private individuals
13 drilled the wells and then Reclamation asked those
14 farmers to transfer their surface allotments to --
15 through -- that Reclamation would facilitate that
16 transfer to other farmers that didn't have access to
17 groundwater. So how that worked sort of an
18 operational day-to-day basis, I -- I don't really
19 know, but clearly they were paying attention to
20 groundwater being pumped and the effect that that was
21 having on surface flows.

22 **Q. So conjunctive management is Reclamation**
23 **helping farmers move groundwater that they pumped**
24 **around the Project to supplement surface water; is**
25 **that what you just said?**

1 A. I don't think that's what I just said. I
2 wouldn't put it that way. Definitely getting into
3 what feels like technical sort of details, but I can
4 just tell you that historically, I mean, and we went
5 through this in the documents, that that's how it --
6 that -- they were asking the farmers in the Project to
7 come to their offices, and they offered to facilitate
8 transfer of allotments, surface water allotments, so
9 that the people who had access to well water would
10 give -- would basically temporarily transfer their --
11 their allotment to somebody else and then everybody
12 would have enough water to grow their crops. I mean,
13 I can only tell you from a historical standpoint what
14 they were doing and what the documents tell me that
15 they were doing, and that's what I read the documents
16 to say they were doing.

17 **Q. Okay. And your opinion is that the states,**
18 **when they entered into the Compact, intended to leave**
19 **room for conjunctive management in the future?**

20 **MS. ATTON:** Your Honor, objection to the
21 extent this calls for a legal opinion.

22 **MS. COLEMAN:** She is testifying
23 extensively about what states intended as a matter of
24 historical fact.

25 **JUDGE MELLOY:** All right. The witness

1 can answer.

2 A. I think that the farmers and the farmers
3 under the district, which would, you know, which were
4 in both states, intended for supplemental water to
5 come from groundwater after -- like, during times of
6 shortage. So I don't know that they talked about it.
7 They didn't talk about it in terms of, quote unquote,
8 conjunctive management, but I do think that there was
9 always a knowledge or an intent to tap the groundwater
10 in times of shortage, and the documents that we've
11 looked at over the last few days support that.

12 Q. (BY MS. COLEMAN) So just to confirm, your
13 opinion is not that the Compacting states intended for
14 Reclamation to manage the groundwater, right?

15 A. I'm sorry. I lost it. Can you repeat it?
16 You can just read it back. It's not that I didn't
17 understand it. It's just that I lost it.

18 Q. Let me -- I will rephrase it not in a
19 negative way.

20 Is your opinion that the Compacting states
21 intended for Reclamation to manage the groundwater?

22 MS. ATTON: Objection, again, to the
23 extent it calls for a legal opinion.

24 MS. COLEMAN: Same response.

25 JUDGE MELLOY: Well, she's talked quite

1 a bit about what she understands the Compact to mean,
2 so I'm going to allow the answer.

3 A. I don't think that specific issue was
4 addressed in the Compact, and as I've said before,
5 there was no discussion of -- of groundwater in the
6 negotiations for the Compact so, no, I -- I don't
7 think that the parties intended that as they signed
8 the Compact.

9 Q. (BY MS. COLEMAN) So -- but looking at your
10 **Rebuttal Opinion 2, "The post-Compact era led to**
11 **Reclamation-led conjunctive management of the overall**
12 **supply." Are you really just saying there it led to**
13 **the conjunctive or supplemental use of groundwater to**
14 **surface water by individual farmers?**

15 A. I probably wouldn't simplify it that much
16 because then that takes away that the -- that
17 Reclamation encouraged this and knew about it so, you
18 know, we could wordsmith it if you want, but I think
19 Reclamation is an important part of this and was aware
20 of the pumping and was aware and encouraging the
21 pumping as we've seen so, yeah, that's my answer.

22 Q. I'm asking you these questions because
23 **conjunctive management is a term that is thrown around**
24 **in this case, and I would like to understand how your**
25 **opinion relates to the use of that term by, in**

1 particular, the state of New Mexico and its amici, but
2 we will move on from that.

3 Okay. Let's look at the next sentence there.

4 "The Bureau of Reclamation and other parties' conduct
5 in the post-Compact era indicates that no contemporary
6 actor believed that the Compact prohibited groundwater
7 pumping." See that?

8 A. Yes.

9 Q. And that is -- that is the opinion you are
10 testifying to today, correct?

11 A. Yes.

12 Q. Forgive me for the wordsmithing again, but
13 the word contemporary, in layman's usage, don't we
14 usually talk about things being contemporary with
15 other things? For example, something occurred at the
16 same time as something else?

17 A. Yes.

18 Q. So when you say contemporary actor, it's
19 actors contemporary with what?

20 A. With people in the post-Compact era. It's a
21 reference back to the clause immediately prior.

22 Q. And the -- you define the post-Compact era to
23 be what?

24 A. Well, my report in this particular case goes
25 up to the Gunaji, I believe -- or, no, the Leggat

1 study, and so up to approximately 1967, if I'm not
2 mistaken.

3 **Q. So you're not talking about contemporary with**
4 **the Compact, correct?**

5 A. This is a very general term. I didn't really
6 honestly define it in my own head when I wrote it. I
7 -- I do talk -- I mean, I am thinking about the
8 Compact people, the people who were part of the
9 Compact, and then their actions after the Compact was
10 signed.

11 **Q. After up to 1960 something?**

12 A. I haven't given it enough thought to be able
13 to put an end date, but I can tell you my rebuttal
14 report stops in about 1967.

15 **Q. Okay.**

16 A. And I didn't research beyond that.

17 **Q. Okay. Now, still looking at the sentence,**
18 **and you see the phrase "other parties"? Do you see**
19 **that term?**

20 A. Yes. I do. Sorry. Yes.

21 **Q. And are you using that term in a legal sense?**

22 A. No.

23 **Q. So would you say you're using the term party**
24 **there to mean the same as a contemporary actor?**

25 A. Yes. I think I -- I mean -- yes, that's

1 correct. I didn't mean anything -- I don't even know
2 what that means, a legal party.

3 Q. It's actually been a subject of dispute in
4 this case, so you're not alone. Okay. So looking to
5 the third sentence, "In fact, during periods of
6 drought in mid-century," and then goes
7 on, "Reclamation encouraged pumping," et cetera. When
8 you say "periods of drought," do you, in fact, mean
9 the one period of drought from, I believe you said it
10 in your direct testimony, 1946 to 1957?

11 A. Yes. And I think when I said "periods," you
12 know, it varied each year. It was different in terms
13 of how severe it was so that's what I was referring
14 to.

15 Q. Okay. Thank you. And I don't have the
16 citation handy, but I think you referred a number of
17 times to the '50s drought. We're going to call it the
18 '50s drought. Is that okay with you?

19 A. That's fine.

20 Q. Okay. The conditions during the 1950s
21 drought were emergency conditions; is that a fair
22 characterization?

23 A. I think it felt that way to the people living
24 through it, yes.

25 Q. Would you agree it was also an emergency for

1 **the Project itself?**

2 A. I've never really thought about it that way.
3 It was definitely an emergency for the -- the farmers
4 in the Project, no question about it. I guess I would
5 -- I'm not sure if the Project itself is -- can be
6 animated that way, so I'm not -- I'm not really sure
7 that I -- I'd have to give that some thought. I don't
8 know.

9 Q. Okay. Well, you say later in that
10 sentence, "To essentially enable the Project to
11 survive." It's a little bit animated there, right?

12 A. Okay. Fair enough.

13 Q. So on -- what did you mean by "enable the
14 Project to survive"?

15 A. So the -- the whole -- the way that
16 Reclamation is set up is that the federal government
17 pays for the construction up front. The farmers are
18 then gathered into or they come together and join in
19 the irrigation districts, which then turn around and
20 repay the federal government for the construction and
21 the various other things. Excuse me. And so if the
22 crops fail and the farmers can't make their payments,
23 then the Project fails, and the government can't get
24 its money back. So in the sense that the settlements
25 would fail, people would lose their jobs or their

1 income, I should say, their livelihoods, and that the
2 farmers might not be able to pay the federal
3 government back, and the irrigation districts couldn't
4 be whole in that, that's what I'm referring to there.
5 And there was definitely that sense in the -- in the
6 records that the people themselves were very concerned
7 and, you know, there was a feeling of -- of emergency.

8 Q. Okay. And you mentioned what I'll refer to
9 in shorthand as the repayment under Federal
10 Reclamation a law, is that a fair abbreviation?

11 A. Yes.

12 Q. Have you also heard the term operation and
13 maintenance in your work in Federal Reclamation
14 projects?

15 A. Yes.

16 Q. Okay. So in addition to repaying the
17 construction cost, the districts also paid operation
18 and maintenance charges; is that your understanding?

19 A. Yes.

20 Q. Okay. And, in fact, during this period, the
21 districts requested deferment of payment of their
22 operations and maintenance charges, correct?

23 A. That sounds right, but I don't remember the
24 details of that.

25 Q. Okay. So to the extent the project managers

1 encouraged pumping during the 1950s drought, they
2 didn't suggest that it should continue after the
3 drought, correct?

4 A. Well, in the '56 report, that is not cited in
5 my report, it does say that they believe that it's --
6 in the future, it's an important part of the supply.
7 I don't know that you can characterize that as
8 encouraging it, but I think they recognized that it
9 was going to be an important future part of the
10 supply.

11 Q. But you're not offering opinion about the
12 significance of that report, correct?

13 MS. ATTON: Objection; mischaracterizes
14 the testimony.

15 MS. COLEMAN: Well, let me ask.

16 Q. (BY MS. COLEMAN) Are you -- you -- we've
17 agreed that prior to today, you haven't offered an
18 opinion on the significance of the 1956 report,
19 correct?

20 A. I can't remember if it was today or
21 yesterday, but during the course of this testimony,
22 that's right.

23 Q. Okay. Thank you. Okay. So setting aside
24 the 1956 reconnaissance report, there's no statement
25 by Reclamation during the 1950s drought characterizing

1 groundwater pumping as anything other than an
2 emergency measure, correct?

3 A. You know, I didn't see any reference frankly
4 at all to the temporal nature of the encouragement,
5 whether it was emergency, and -- and they were saying
6 stop as soon as -- as soon as we're out or if it was
7 intended to be long term. I don't think it specified
8 -- any of the announcements specified that.

9 Q. Okay. But by the time of the first water
10 announcement you've cited, which is 1951, a number of
11 farmers in EBID had already drilled their wells,
12 correct?

13 A. Yes.

14 Q. Okay. I believe it was that conover found 37
15 wells in 1947. Do you remember talking about that?

16 A. Yes.

17 Q. All right. Well, let's -- let's move on to
18 the -- the 1940s. So let's go back to your 2019
19 report, and I'm just going to go to the page instead
20 of -- okay. So, actually, before we get to that, in
21 your October, 2019, report, you actually start your
22 discussion about the 1940s by talking about the U.S.
23 Geological Survey study of El Paso groundwater from
24 the 1930s. Do you remember that?

25 A. Can you point me to a page?

1 Q. Yes, I can. Page 92 of your 2019 report.
2 I'll just pull that up.

3 A. Thank you. Can you repeat the question for
4 me?

5 Q. I'm sorry. Yes. We can zoom in on that
6 paragraph. Okay. That's fine. Okay. So you see
7 there, "In 1946, EBID followed the City of El Paso's
8 lead and requested that the USGS study the groundwater
9 supply in the Rincon and Mesilla Valleys." Do you see
10 that?

11 A. Yes.

12 Q. Okay. So here, you are giving context for a
13 drought that began in the 1940s by reference --
14 referencing a study that was being conducted in the
15 1930s; is that fair to say?

16 A. If I understood what you just said -- I'm not
17 sure I understood what you just said. I'm sorry.
18 Could you repeat it?

19 Q. Okay. What do you mean by EBID followed the
20 City of El Paso's lead there?

21 A. So in my report, I talk and I -- I think it's
22 earlier in this same section so give me just a second.
23 Yeah. Begins on Page 83. I discuss starting on Page
24 83, it says, "The City of El Paso's request and
25 cooperation with the U.S. Geological Survey to study

1 groundwater supplies for municipal purposes," and so
2 that's what I'm referring to in that sentence you just
3 read.

4 Q. Okay. So what do you mean by EBID followed
5 the City of El Paso's lead on Page 92?

6 A. Also requesting a study by USGS to study
7 groundwater.

8 Q. Okay. So that's just a statement of -- of it
9 follows in time?

10 A. Yes.

11 Q. Not that they were thinking of the City of El
12 Paso study?

13 A. That's correct. It's just that El Paso had
14 asked the USGS to do a study, and now EBID was.
15 That's all.

16 Q. All right. Backing up for a second, I'm
17 going to probably refer to the U.S. Geological Survey
18 as the USGS throughout our discussion today.
19 Understood?

20 A. Yes.

21 Q. Okay. And in your work as an environmental
22 historian, you're often looking at USGS reports,
23 right?

24 A. Yes.

25 Q. And you've -- you're generally familiar with

1 the history of the USGS, right?

2 A. Yes.

3 Q. Okay. And based on what you know about the
4 USGS as a historian, would you agree that one of the
5 USGS's functions is study of the groundwater resources
6 in the United States?

7 A. Starting in the late 19th and into the 20th
8 century, yes.

9 Q. Okay. Thank you. Okay. So let's focus in
10 on this Page 92, the paragraph beginning in 1946, EBID
11 followed. So you've done consulting project for a
12 number of irrigation districts in your experience,
13 correct?

14 A. Yes.

15 Q. And you're familiar with the types of records
16 that irrigation districts maintain in the ordinary
17 course of business?

18 A. I think that's fair, yes.

19 Q. Okay. And -- and you did visit the EBID --
20 I'm sorry. When I say "EBID," I'm referring to
21 Elephant Butte Irrigation District.

22 A. Yes.

23 Q. Okay. Thank you. And you visited the EBID
24 collection housed at New Mexico State University,
25 right?

1 A. I did. It's enormous.

2 Q. Okay. Now, when you were discussing the EBID
3 request in 1946, you discussed their intention in
4 seeking that request by reference to the statements in
5 Conover. Am I recalling that correctly?

6 A. I referenced -- you asked -- I just want to
7 make sure I understand the question. You're asking if
8 I referenced the district's intent by referencing what
9 Conover said?

10 Q. Correct. So, for example, if we look at
11 Footnote 94 on Page 92, you're citing there to
12 Conover?

13 A. Yes. That's right.

14 Q. Okay. Did you look at any EBID board meeting
15 minutes about this request to the USGS?

16 A. I did, yes.

17 Q. Okay. Which minutes were those?

18 A. I don't recall off the top of my head exactly
19 what day they discussed it.

20 Q. Okay. Let's go to your rebuttal report, Page
21 17, and let's go right to the top there to the
22 paragraph, "When Project supplies began to wane in the
23 mid 1940s due to the onset of drought conditions, the
24 Elephant Butte Irrigation District, EBID, contracted
25 with the USGS." Do you see that?

1 A. Yes.

2 Q. And then it ends in Footnote 77?

3 A. Yes.

4 Q. Then if we go to Footnote 77, it refers to
5 Conover, correct?

6 A. Yes.

7 Q. Okay. So, again, here you are citing Conover
8 to characterize the EBID's request to the USGS that
9 resulted in the Conover study, right?

10 A. Yes. And I'll just say, the previous
11 document we looked at was a letter to EBID and didn't
12 seem to me that there was any controversy over what
13 this report was. There was a letter to Greg of EBID
14 stating Conover's understanding of the investigation
15 and then report and preliminary memo that resulted
16 from that, of course, actually did those things.

17 Q. Okay. But your footnote in your previous
18 report begins with citation to the 1947 memo, but that
19 doesn't -- that doesn't matter. So, now, we look --
20 let's see here. Let's go to the next sentence. The
21 next sentence is, "The mere initiation of the study is
22 in and of itself significant since such a study would
23 have been unnecessary if there was a prevailing
24 understanding that either the Project filings had
25 included groundwater or conversely that the Compact

1 had precluded such use." Do you see that?

2 A. Yes.

3 Q. So you're characterizing the initiation of
4 the study as significant, but you're not citing any
5 EBID minutes or documents about the initiation of the
6 study; is that right?

7 A. It's been established in my report that the
8 study was initiated.

9 Q. All right. But here, you're attributing
10 significance to the initiation, and I'd like to
11 understand what you're relying on to talk about the
12 significance of the initiating the study?

13 A. This is a part of my opinion. I'm relying on
14 the fact that the study was initiated, and my opinion
15 is related to the significance of that.

16 Q. Okay. So there's no citation for the
17 sentence, right?

18 A. It's -- it's my opinion. I'm the citation.

19 Q. Got it. Okay. Let's go to the fourth
20 sentence. "The district knew its own history, which
21 included use of well water for irrigation in the years
22 before Reclamation constructed the Project. In fact,
23 Conover noted pumping from groundwater," et
24 cetera, "as long ago as about 1896." Do you see that?

25 A. Yes.

1 Q. Okay. So in your opinion, when EBID
2 requested a USGS study of groundwater in 1946, it was
3 looking to the use of wells in the 1890s and early
4 1900s as historical precedent?

5 A. Well, he's -- he did it as a -- so the USGS
6 study, the Conover study, was done as a cooperative
7 agreement with EBID, and I don't know what you mean
8 by "precedent," but this is a quote from -- from the
9 Conover study that states that the Mesilla Valley
10 pumping had happened as long ago as 1896. So I don't
11 know what you mean by "precedent," but this is a quote
12 from a report that was done cooperatively with EBID.

13 Q. Okay. Well, let me focus you then on "the
14 district knew its own history." So you are saying the
15 district knew the history of groundwater pumping back
16 to 1896 at the time that it requested the report from
17 the USGS?

18 A. I think that's a pretty fair statement, yeah.
19 Yes.

20 Q. But I -- and your discussion of the history
21 of memory, you questioned the reliability of memory 30
22 years or more, right?

23 A. That's not what I said, no.

24 Q. Okay. Well, you agree and the parties have
25 stipulated that EBID was formed in 1918, right?

1 A. Yes. Originally it had been what was called
2 the Water Users Association. It adopted the new --
3 under the new laws as an irrigation district, but
4 those farmers, the same people -- many of the same
5 people had been in a cooperative association prior to
6 that called the Water Users Association.

7 **Q. What year was the Water Users Association**
8 **formed?**

9 A. I believe it was 1907, but I'm not a hundred
10 percent sure on that.

11 **Q. So, really, when you say water -- when you're**
12 **referring here to water use back to 1896, you're not**
13 **talking about the district's history specifically,**
14 **right?**

15 A. No, you're right. Probably not. I think my
16 reference here is really more to -- this is a small
17 area, low population, and so this is more of a
18 historical reference to that a lot of these farms are
19 handed down generation to generation, and they -- they
20 know what happened before. It's sort of the culture
21 of these types of farming rural communities, so that's
22 -- that's really all this is a reference to, and there
23 was an understanding that well water had been used
24 prior to the reliability of surface supply coming from
25 Elephant Butte Reservoir.

1 Q. Do you have any documents showing that the
2 EBID board in 1946 was thinking about groundwater
3 pumping in the early 1900s when it requested the
4 Conover study?

5 A. Not at my hands, no.

6 Q. Did you compare who was on the EBID board in
7 1946 to who was on the board even in 1918 --

8 A. No.

9 Q. -- to see if there was overlap?

10 A. No.

11 Q. The answer is no, correct?

12 Okay. Let's go to the next paragraph on Page
13 17 there. Again, "With this background of knowledge
14 and use, it would be difficult to conclude that EBID
15 would have requested," et cetera. Okay. So, again,
16 with this background of knowledge and use, do I
17 understand that to mean that your assumption that
18 there was knowledge handed down in the farming
19 families of EBID about groundwater pumping in the
20 early 1900s?

21 A. Well, the farmers were deeply dependent on
22 these agricultural experiment stations, which existed
23 throughout the west, and that's where those -- that
24 early study that we talked about yesterday at the
25 Lester and Vernon report came from. And just in terms

1 of western water history and agricultural history,
2 those experiment stations were really critical to
3 establishing these projects and establishing
4 irrigation and farming on -- on western territories on
5 these arid lands. So that's where that document came
6 from, and yes, I am making an assertion that people
7 understood that history and that people who were
8 farming on these lands had a general understanding of
9 the land on which they were farming and an
10 understanding of the resources they had available to
11 them. Yes, that is a pretty well-formed opinion in my
12 -- in my thought.

13 **Q. But you have no documents to show that the**
14 **EBID board was referring to that general understanding**
15 **of historical groundwater use when they requested the**
16 **Conover study, correct?**

17 A. I don't have a specific document, no, but a
18 lot of long -- long study of this stuff makes me think
19 that they probably knew about it, but, no, I don't
20 have a document.

21 **Q. But Hill, in 1968, wouldn't have remembered**
22 **his work on the Compact?**

23 A. I did not say that.

24 **Q. His memory would have been unreliable?**

25 A. I didn't say that either.

1 **Q. What did you say?**

2 A. I said that when I look at historical
3 documents and I'm doing historical research, I find
4 the materials from the time I'm studying to be more
5 reliable than things that people say many years later.
6 I don't at all -- I never said it was unreliable. I
7 said I look at those kinds of documents differently,
8 and the further away you get from the events that
9 actually took place, the less reliable I think those
10 documents are. But I -- I'm not saying he doesn't
11 have -- that he was -- didn't remember anything, but I
12 think that -- and I'm not a historian of memory. I
13 just know that there's a field out there that as you,
14 you know, gather more information over the course of
15 time, you know, those things can filter into your
16 memory. All you have to do is read the newspaper to
17 see that, you know, two people who observe the exact
18 same incident don't have the same memory of it so
19 that's all I'm saying, and I never said that he was
20 unreliable and that his memory was wrong.

21 **Q. Thank you. Let's return to this paragraph**
22 **here. This is the part after the semicolon.**

23 **"Likewise, the federal USGS would not have undertaken**
24 **the study if it was commonly understood within the**
25 **federal government that such pumping would either harm**

1 Project beneficiaries or violate the Compact," et
2 cetera, ending in Footnote 82. Do you see that?

3 A. Yes.

4 Q. When we look to Footnote 82, that is a
5 citation to Conover, and that -- I'm pulling it up.
6 And that is a citation to the 1954 Conover, correct?

7 A. I believe so, yes.

8 Q. But Conover doesn't discuss the factors that
9 the USGS considers when it decides to fund groundwater
10 studies, right?

11 A. No.

12 Q. And you agree that studying underground water
13 resources is one of USGS's functions, right?

14 A. Yes.

15 Q. Have you cited any document that the USGS
16 conducts a legal analysis before deciding whether to
17 undertake the study of groundwater resources?

18 A. No.

19 Q. Let's see here. Okay. Let's pull up New
20 Mexico Exhibit 1439, and let's go to -- yes, let's
21 zoom in on that letter. Oops, too zoomed in. Okay.
22 So this is the -- this is the letter, I'll just
23 represent to you, you cited this letter in your
24 October, 2019, report from C.V. Theis to Sayre, I
25 believe, within the USGS.

1 A. Okay.

2 Q. All right. And let's -- just focusing in
3 there on the second paragraph, and if our trial
4 director is too slow, we can just -- can you read it
5 fine there? Okay. There we go. All right. Let's --
6 do you see that sentence in the middle beginning, "The
7 purpose of the memorandum"?

8 A. Yes.

9 Q. Okay. "Is to give at least the consequences
10 of sump pump irrigation and to indicate that it will
11 probably be uneconomical to try to install a system of
12 wells that would irrigate all the land, and that any
13 new land brought in will necessarily detract from the
14 water supply of existing irrigated acreage."

15 Actually, let me back up one moment. You see at the
16 top there in the first sentence, it says, "The reason
17 for this preliminary memorandum," do you see that?

18 A. Yes.

19 Q. And this is a reference to Conover's 1947
20 memorandum, correct?

21 A. Yes.

22 Q. So in that second highlighting there, he's
23 talking about the purpose of the memorandum, and then
24 -- and you see there that any new land brought in will
25 necessarily detract from the water supply of the

1 existing irrigated acreage. I'm sorry. We did not
2 read this whole paragraph out loud. I was trying to
3 save time. But we're referring to the drilling of
4 wells here. Do you see that?

5 A. Yes.

6 Q. And C.V. Theis is telling Mr. Sayre that,
7 "Increasing the existing irrigated acreage with the
8 drilling of wells will necessarily detract from the
9 water supply of the existing irrigated acreage." Do
10 you see that?

11 A. Yes.

12 Q. Then in the last sentence, it says, "The
13 memorandum is needed in order to help the Elephant
14 Butte Irrigation District" -- or "Elephant Butte
15 District," excuse me, "and the state engineer
16 establish a policy before the situation gets out of
17 hand." Do you see that?

18 A. I do.

19 Q. Does this suggest to you that the USGS
20 thought the drilling of wells was consistent with the
21 Compact?

22 A. Doesn't mention the Compact.

23 Q. Does it suggest to you that C.V. Theis
24 thought that pumping was acceptable?

25 A. He does not state whether or not he thinks

1 it's acceptable. What he does do is note that there
2 is going to be an effect on the existing, meaning the
3 surface water supply.

4 Q. Okay. And then he refers to, "Before the
5 situation gets out of hand." Do you see that?

6 A. I do.

7 Q. And what do you -- you quoted this document.
8 Can you tell me what you think he means there?

9 A. I think he's saying that the district and the
10 state engineer need to have a policy about groundwater
11 pumping before there's too many of it and it effects
12 -- it effects the existing surface supply, which then,
13 you know, not too many years later, the Bureau of
14 Reclamation encourages it, and also, so did Conover.
15 Conover did mention -- well, I'll stop there. You
16 didn't ask.

17 Q. Okay. So C.V. Theis, as Mr. Hoffman, spoke
18 to you about, was involved in the preparation of the
19 Joint Investigation Report, correct?

20 A. Yes.

21 Q. Okay. And you are suggesting that to C.V.
22 Theis, at least, there might be a situation where
23 there are too many wells, correct?

24 A. I think it could be read that way, yes.

25 Q. Okay. And that -- and to C.V. Theis, there

1 might be a situation where the wells impact the
2 surface water supply, correct?

3 A. I mean, it says what it says. It says, "Any
4 new land brought in will necessarily detract from the
5 water supply of existing irrigated acreage." So, yes,
6 he's making that connection.

7 Q. Okay. Does he sound happy about it?

8 A. I can't characterize whether or not he's
9 happy.

10 Q. All right. Back to Rebuttal Report Page 17.
11 Okay. So, now, "Instead, considering the Compact's
12 silence on the issue of groundwater and the dearth of
13 available data on the subject, EBID commissioned the
14 USGS," et cetera. Do you see that?

15 A. Yes.

16 Q. And that ends in Footnote 83, right?

17 A. Yes.

18 Q. And if we go to Footnote 83, we will see
19 minutes of the regular meeting of the board of
20 directors of the Elephant Butte Irrigation District
21 held on October 7th, 1947. Do you see that?

22 A. Yes.

23 Q. And there, you have attributed, I guess, the
24 source of that document to counsel, right?

25 A. Yes.

1 **Q.** Let's actually --

2 **MS. COLEMAN:** I just wanted to offer if
3 the Special Master wanted to take a break or -- we're
4 about to get into a new topic. Oh, you're on mute.

5 **JUDGE MELLOY:** Let's keep going.

6 **Q.** **(BY MS. COLEMAN)** All right. Let's pull up --
7 we originally had this on the exhibit list as US-376,
8 but then it was amended to New Mexico 1605, so here is
9 New Mexico 1605. We are going to scroll through
10 enough in the hope that you will -- okay. Do you see
11 that highlighting there? Is this a copy of the 1947
12 minutes that you're citing in your report?

13 **A.** It appears to be, yes.

14 **Q.** Okay. And the highlighting that we saw when
15 we scrolled through that, that was your highlighting,
16 right?

17 **A.** I am not sure. It might have been.

18 **MS. ATTON:** Your Honor, objection. I
19 think it's fair to say that we don't know whose
20 highlighting this is.

21 **MS. COLEMAN:** Well, actually, we do. We
22 do. And I'm happy to pull up the native version of
23 this PDF, which will show in the comments that
24 Jennifer Stevens made the annotations and includes
25 what is in her comment on the third page there. I'm

1 not interested in what's in that comment bubble, but I
2 can bring it up for you if you like, Ms. Atton.

3 **JUDGE MELLOY:** All right. Go to that
4 section again. What is the question, and what is the
5 objection? I'm not sure where we're at, at this
6 point.

7 **MS. COLEMAN:** I'm just asking if this is
8 the version of the EBID board minutes that Dr. Stevens
9 reviewed in preparing her rebuttal report.

10 A. It appears to be.

11 **Q. (BY MS. COLEMAN)** Okay. And this document,
12 **New Mexico Exhibit 1605 is 34 pages long. Perhaps you**
13 **can't see that, but I'll represent that for the**
14 **record. So other than what I'll represent are your**
15 **highlighting annotations, is this how the document was**
16 **given to you by counsel?**

17 A. No. I don't believe so. I think I had
18 access to all of -- I know I had access to all of the
19 EBID minutes, and this relates back to a question you
20 asked earlier. I can't remember how everything was
21 given to me, but I -- they did not just give me
22 certain parts of it. I had access to the entire
23 thing, to all of the minutes.

24 **Q. Okay. So but the footnote for this**
25 **identifies the source as counsel?**

1 A. That only means that we received it from
2 counsel and then we excerpted parts of it internally,
3 not that -- well, I guess I don't understand what
4 you're asking.

5 Q. I just want to understand that the document
6 -- if this is the scope of the document that you
7 looked at -- if this is the scope of the EBID minutes
8 that you looked at in -- in connection with Footnote
9 83?

10 A. I can't answer that. I don't remember.

11 Q. Okay.

12 A. As I said before, I looked at the EBID
13 minutes.

14 Q. Okay. And you looked at the EBID minutes,
15 all of the EBID minutes for 1947?

16 A. I'm sure that I did, yes. I'll just say, I
17 looked at so many documents in this case, as you can
18 imagine, I can't remember with specificity every
19 single document I looked at.

20 Q. Okay. So let's go to Page 3 of this
21 document, and we'll zoom in on that highlighted part
22 that says, "USGS investigation on groundwater" in the
23 margin. So would you agree that this entry here is
24 discussing Conover's September, 1947, memorandum?

25 A. It appears to be, yes.

1 Q. Okay. And do you see that at the end,
2 they're talking about calling the board into session
3 again within the near future for the purpose of
4 discussing the report and the pumping situation in
5 greater detail, do you see that?

6 A. Yes.

7 Q. Okay. And then let's go to Page 6, and at
8 the top there is the heading so we're looking at the
9 minutes of the special meeting held October 17th,
10 1947. Do you see that?

11 A. Yes.

12 Q. Okay. Then look at the first entry there
13 next to discussion of U.S. Geological Survey report.
14 Do you see that?

15 A. Yes.

16 Q. Okay. And we'll look at the last sentence of
17 this one. It says, "Definite conclusions and
18 recommendations on the part of the Board were deferred
19 until a later date pending further consideration of
20 the matter and a determination of the consensus of
21 opinion among water users in the district." Do you
22 see that?

23 A. Yes.

24 Q. Pending a consensus means there wasn't a
25 consensus about how to address pumping at the time of

1 **this meeting, right?**

2 A. You could read it that way or you could read
3 it that they wanted to make sure that more people were
4 in on the discussion. I wouldn't necessarily read
5 that, that there wasn't a consensus. I mean, it could
6 mean that, but it could not, too.

7 Q. Okay. But you see they're deferring
8 conclusions and recommendations, right?

9 A. Yes.

10 Q. Let's go to Page 8 of this document, and
11 that's fuzzy, but it is the minutes of a meeting of
12 December 5th, 1947. Will you accept that,
13 Dr. Stevens?

14 A. I will.

15 Q. Okay. Thank you. And we will go to Page 9,
16 and you have some highlighting there, again, next to
17 the heading "pumping," and, again, says, "The total
18 number of wells reported by the Bureau was 37. After
19 a brief discussion of the pumping situation, it was
20 deemed advisable to carry the matter over to the
21 January meeting for more extensive discussion and
22 possible action." Do you see that?

23 A. Yes.

24 Q. Okay. So does this suggest that the Board
25 had a clear view that pumping was acceptable?

1 A. Because this is just a set of minutes and not
2 a transcript, I'm not sure that we can really say, but
3 I think they -- they took it very seriously, and they
4 intended to talk about it as much as they needed to,
5 to come to a decision.

6 Q. Okay. Let's get New Mexico Exhibit 175 open,
7 please. This exhibit is previously admitted with
8 Mr. Esslinger. Let's go to Page 371 of the exhibit
9 and look at the heading. And our trial director is
10 slow. Trial director is the -- the program we use to
11 show these exhibits. Page 371 shows the heading of
12 the minutes dated August 5th, 1947. We'll get there.
13 So, anyway, we'll go to Page 373, and we'll look at
14 the bottom paragraph on 373. So this is reporting,
15 for the sake of paraphrasing, about the drilling of
16 additional wells by the end of -- by -- as of August,
17 1947, so we see 14 irrigation wells have been drilled
18 in the Rincon Valley, and then in the next sentence,
19 it says, "In the Mesilla Valley, about five wells have
20 been drilled." Do you see that?

21 A. Yes.

22 Q. So that's 19, right?

23 A. Yes.

24 Q. Now, let's look at the last sentence, which
25 is going to carry over. "It was pointed out most

1 wells drilled on the floor of the valley will be used
2 for emergency only during the time that storage is
3 badly depleted or entirely exhausted, and that
4 operation of these wells will be discontinued in most
5 instances, when surface water conditions return to
6 normal." Do you see that?

7 A. I do.

8 Q. So would you agree that this discussion
9 contemplates supplemental or conjunctive use as an
10 emergency measure?

11 A. It specifically says emergency only in this
12 1947 set of minutes.

13 Q. So let's go down in the paragraph -- that
14 paragraph. This document is, like, a hundred
15 megabytes, and I'm convinced that it slows the whole
16 -- the whole system down.

17 A. I feel your pain.

18 Q. Let me -- while this is loading, let me just
19 ask you, if I recall correctly from your CV, you
20 served on the Boise Planning and Zoning Commission; is
21 that right?

22 A. Yes. For many years.

23 Q. You're no longer on the commission, right?

24 A. Correct.

25 Q. Let me see where we are with the callout for

1 -- yes. Okay. So this next sentence here on Page
2 373, the top -- sorry, this is 374. "The possibility
3 of direct encroachment upon the District groundwater
4 supply, together with later indirect encroachment upon
5 surface water supply, by wells drilled on bench lands
6 adjacent to the valley was called to the attention of
7 the Board." Do you see that?

8 A. Yes.

9 Q. So the term encroachment typically refers to
10 something that is impinging on somebody else's rights,
11 correct?

12 A. I -- I don't know about rights, but it's
13 something impinging -- or infringing on something
14 else, yes.

15 Q. Okay. Could we say an encroach refers to
16 something adversely impacting something else?

17 A. Probably in most cases, yeah. I think so.

18 Q. So the use of the word encroachment here
19 would suggest that pumping outside of the emergency
20 context would be impermissible, doesn't it?

21 MS. ATTON: Your Honor, just so the
22 record is clear, this passage, I think relates to and
23 expressly says wells drilled on bench lands and lands
24 adjacent to the valley.

25 JUDGE MELLOY: And what's your point?

1 **MS. ATTON:** Just for clarity, Your
2 Honor.

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

4 A. I don't think it says anything about the
5 permissibility here at all, actually, but it does --
6 it's basically consistent with what Conover -- I think
7 it was Conover said regarding the interdependence of
8 groundwater and surface water, but I don't think that
9 this particular statement says anything about
10 permissibility.

11 **Q. (BY MS. COLEMAN)** But it suggests it would be
12 an adverse impact, correct, adverse pumping -- let's
13 except the clarification from wells drilled on the
14 bench lands adjacent to the valley, would have an
15 adverse impact upon the -- indirect adverse impact on
16 the surface water supply, correct?

17 A. I think I'm probably most comfortable with
18 just sticking with the language that it says, which is
19 an indirect encroachment on surface supply. So I
20 don't think I'm comfortable substituting other words
21 for that. It just says what it says.

22 **Q. Okay. Thank you. I'd like to bring up Texas**
23 **Exhibit 695. So this is a letter dated January 9th,**
24 **1926, from D.C. Henny to J.W. Taylor, president of**
25 **Elephant Butte Irrigation District. Do you see that?**

1 A. Yes.

2 **Q. So who was D.C. Henny, Dr. Stevens?**

3 A. He had previously been with the federal
4 government. I think by now, he was a private
5 consultant, if I'm not mistaken. Sorry for all the
6 movement. I'm trying to get the copy out.

7 **Q. And wasn't D.C. Henny New Mexico's consulting
8 engineer in the Compact negotiations?**

9 A. Yes, I believe that's right.

10 **Q. Okay. So looking to -- on the first page
11 there, we'll just zoom in on the top part of that if
12 possible. Okay. So the first paragraph there is
13 referring to some letters, your letters of December
14 19th and 22nd. Do you see that?**

15 A. Yes.

16 **Q. Okay. Referring to letters from EBID, and
17 then we'll look at Paragraph 2. Well, let me just ask
18 you quickly, Dr. Stevens, have you seen this document
19 before?**

20 A. Not sure that I have. Maybe have seen it in
21 passing, but not studied it in any great detail, and
22 it's ten pages long so...

23 **Q. I believe Dr. Miltenberger references this
24 document in his report. Does that refresh your
25 recollection?**

1 A. It doesn't, to be honest with you. And like
2 I said, I'm sure I've seen it and skimmed it, but I
3 don't have immediate recall of what it's about.

4 Q. Okay. So we see in Paragraph 2, the
5 immediate question before you is the attitude which
6 the districts should assume as to the inclusion of
7 pumped mesa lands. Do you see that?

8 A. Yes.

9 Q. Okay. And let me just skip to Paragraph 3.
10 I'm sorry. The -- yes. Paragraph 3 and its little
11 subparagraphs there. Okay. So in Paragraph 3, I'll
12 read it, "Additions of pumped lands, which will not
13 affect the project water supply, may be made in two
14 ways, A, by transfer of reservoir rights from less
15 valuable valley lands to pumped lands; B, by pumping
16 from underground water sources below El Paso," with
17 below underlined. Do you see that?

18 A. Yes.

19 Q. So here with the somewhat confusing use of
20 which there, would you agree he's saying that pumped
21 lands can be added to the district if they have a
22 transfer of reservoir rights through the district or
23 if the pumping is occurring below El Paso; is that --
24 is that a fair translation?

25 A. I think you more or less just used the exact

1 same words that he wrote. It says -- it says what it
2 says.

3 Q. I'm sure Ms. Atton would tell me if I did not
4 so we'll leave it like that. So if it's true, in
5 1946, that the district knows its own history, as you
6 say, the district would have been aware of this D.C.
7 Henny letter, correct?

8 A. I don't know what the district is in that
9 sense. Do you mean the board of directors? Do you
10 mean all the farmers under it? I don't agree with
11 that.

12 Q. Okay.

13 A. With that --

14 Q. When you said the district knew its own
15 history, who were you referring to?

16 A. Well, as I explained, I think that the people
17 who worked those lands have a common understanding of
18 their history and what their resources are. I don't
19 know what you mean when you're saying the district
20 would know about this letter.

21 Q. Okay. So here, let's -- let's talk about the
22 district board then.

23 A. Okay.

24 Q. We'll agree in 1946 that the EBID board
25 requested the USGS study, correct?

1 A. Yes.

2 Q. And in your view, at least as I read Page 17
3 of your rebuttal report, when the district board made
4 that request, the district board knew the history of
5 water use below Elephant Butte back to the 1900s; is
6 that a fair summary?

7 A. I think that's probably a fair assessment of
8 what I've said, yes.

9 Q. Okay. Would they also have known about this
10 letter from D.C. Henny from 1926?

11 A. I think being familiar with the general
12 history of the district is really different than
13 knowing about a specific letter that was written in
14 1926, so, no, I don't -- I don't believe that that's
15 an analogy that I can abide by.

16 Q. Fair enough. Okay. So wanted to bring back
17 up New Mexico Exhibit 175 here. And the first two
18 pages of it, so the first page we see is the minutes
19 of the regular meeting of the board of directors for
20 EBID held July the 3rd, 1933. Do you see that?

21 A. Yes.

22 Q. Okay. And we'll go to, I believe it's the
23 second page of this. Okay. In the left-hand margin
24 there, we see, "Legal opinion regarding use of water
25 from river." Do you see that?

1 A. I do.

2 Q. Okay. Now, in the first sentence there, it
3 says, "At a previous meeting of the board of
4 directors, the office was directed to secure from
5 Judge Mechem on opinion pertaining to the use of water
6 from the river by municipalities, corporations, and
7 other agencies. Do you see that?"

8 A. Yes.

9 Q. Do you know who Judge Mechem is?

10 A. I think he was the legal -- the lawyer for
11 EBID, if I'm not mistaken.

12 Q. I believe we're referring to Edwin Mechem.
13 We'll find that out later on. Was Judge Mechem
14 involved in the Compact negotiations?

15 A. I think he was, yes, but I don't recall
16 specifically what his role was.

17 Q. Is it correct that he was on the committee of
18 legal advisors for Texas?

19 A. That could be right, yes, before it was Major
20 Burgess. Maybe they worked together or maybe it was
21 one after the other. I can't recall specifically
22 right now.

23 Q. So let me just read the next sentence, "In
24 Judge Mechem's opinion in this matter, which was read
25 to the Board, he sets out that no agency has any right

1 to diminish the flow of water in the river, whether
2 they do it directly by pumping out of the river, or
3 indirectly by building sumps into which the water
4 filters from the river, the use of same is illegal."
5 Do you see that?

6 A. Yes.

7 Q. Okay. So Judge Mechem was counsel for EBID
8 and involved in the Compact negotiations, and he's
9 offering this opinion, correct?

10 A. He's -- yes, that's what this document says.

11 Q. Thank you. Now, going back to your rebuttal
12 Page 17, if we -- you have --

13 JUDGE MELLODY: Ms. Coleman, maybe we
14 should take a little break here. We've been going
15 quite a while. I would like to try to finish at least
16 the cross-examination this afternoon. How much more
17 do you think you have?

18 MS. COLEMAN: Unfortunately, quite a
19 bit, Your Honor.

20 MS. ATTON: Your Honor, if I may, and I
21 do apologize. This wasn't anticipated on our end.
22 Dr. Stevens has to catch a flight, as I said, for
23 personal reasons, I believe at about 4:15 today, and
24 then she 's not available again until later next
25 month, and we'd have to have a discussion about that

1 as to when she might be able to be brought back. But,
2 of course, in this case, I want to make sure the
3 records are clear that Texas has finished its
4 cross-examination, and it would only be the U.S. and
5 anything that Colorado might want to ask.

6 **JUDGE MELLOY:** Well -- all right. Well,
7 is this a good stopping point, Ms. Coleman, or do you
8 have a logical stopping point?

9 **MS. COLEMAN:** I have one or two more
10 questions, and then it's a stopping point.

11 **JUDGE MELLOY:** All right. Let's do
12 that, and then we'll break for the evening.

13 **MS. COLEMAN:** Sure.

14 **Q. (BY MS. COLEMAN)** So let's -- let's just look
15 at -- sorry. Let's go back to Page 17 of your
16 rebuttal report at the top, and that second sentence,
17 if we can, is, "The mere initiation of the study is in
18 and of itself significant, since such a study would
19 have been unnecessary if there was a prevailing
20 understanding that either the Project filings had
21 included groundwater," et cetera. Do you see that?

22 **A.** Yes.

23 **Q.** But a study would have been necessary if EBID
24 wanted to refute the opinions of Henny and Mechem that
25 we just talked about, correct?

1 **MS. ATTON:** Objection; foundation.

2 **MS. COLEMAN:** She's testified --

3 **JUDGE MELLOY:** Well, she -- I'm going to
4 overrule. You may answer.

5 A. Which opinion specifically are you -- are you
6 -- can you just clarify for me what the opinion is?

7 **Q. (BY MS. COLEMAN) So we saw in the Henny**
8 **letter his opinion that new pumped lands could not be**
9 **added to the district unless they had a right to draw**
10 **from the reservoir taking underground water from below**
11 **El Paso, and we saw Judge Mechem express the opinion**
12 **that both pumping from the river and the building of**
13 **sumps that would filter water from the river would be**
14 **illegal. So I'm referring to those two opinions, and**
15 **I'm asking you whether a study would have been**
16 **necessary for the Board to refute those opinions,**
17 **correct?**

18 A. I'm not sure that -- well -- I'm not sure
19 that one leads to the other. In other words, it -- it
20 seems to me, when you look at the context of the
21 initiation of the study in 1946, that the farmers and
22 the board of the EBID were concerned about the lack of
23 surface flow and trying to figure out a solution to
24 that so, yes, they reached out to the USGS. Now,
25 whether that was -- I mean, I don't see any evidence

1 that that was in specific relation or had anything to
2 do with either a letter from Henny or from Judge
3 Mechem. I think they were merely concerned about not
4 being able to irrigate their lands and grow their
5 crops. So I guess I'm not -- I don't see any evidence
6 in the historical record that the former two things
7 had anything to do with the latter thing.

8 **Q. But you also don't see any evidence in the**
9 **record that pumping in the early 1900s had anything to**
10 **do with this request of the USGS, correct?**

11 A. I don't -- I don't think I said that it did.
12 I don't think I ever said that the 1947 study had
13 anything to do with the early 1900s.

14 **Q. I'll just refer you back to the district knew**
15 **its own history, and with this background of knowledge**
16 **and use, it would be difficult to conclude that EBID**
17 **would have requested the USGS study. So you're not**
18 **saying then that the district was thinking of pumping**
19 **that existed in the 1900s when it requested this**
20 **study?**

21 A. I think that they knew from the previous
22 studies that there was a lot of groundwater under the
23 valley so I think that that's what I'm referring to
24 there, but I think -- I don't know if you're just,
25 like, trying to -- I'm not sure. I mean, I'm not

1 disagreeing with what you're saying, but when I say
2 they knew of their own history, I'm referring to a
3 general knowledge amongst the farmers in the district
4 that there was an underground water supply, and I
5 believe in the 1940s, they were extremely concerned
6 about the lack of water in Elephant Butte and a
7 potential -- a potential short in their surface water
8 supply. So I -- I am simply saying that because they
9 knew, they had a -- they had knowledge, general
10 knowledge, of the existence of this underground water
11 supply because, like I said, I think they knew their
12 own history, that they reached out to USGS for details
13 on what to do and whether or not they could use it and
14 what the impacts would be, so that's the connection
15 I'm making, and I don't see anything in the record
16 where EBID is talking about the Henny letter or about
17 the Mechem opinion that has anything to do with why
18 they're asking for the USGS to do this study. I just
19 don't see a direct line there.

20 **Q. If they knew from previous studies that there**
21 **was a lot of groundwater under the valley, would it be**
22 **necessary for them to ask the USGS to confirm that?**

23 A. Well, that's not specifically what they were
24 asking. They were asking the USGS to tell them and
25 asking Conover to explain to them and provide

1 information about what the impacts of pumping would be
2 on surface flow, and that's the first time that
3 question had been studied and asked.

4 Q. And if pumping was anticipated or at least
5 not precluded by the Compact, do you have any -- why
6 would they need to understand the impacts of pumping
7 on the surface flow?

8 A. Can you read that back to me again?

9 Q. Oh, okay. Let me just ask you. Why, in your
10 view, having reviewed the historical record, on what
11 basis -- I'm sorry. Let me withdraw that.

12 Having reviewed the historical record, are
13 you of the -- aware of the reason why EBID wanted to
14 understand the impacts of pumping on surface flow?

15 A. They were an irrigation district under a
16 surface water project so, I mean, I think it's as
17 simple as that. They needed to understand what the
18 impacts of groundwater pumping would be on the surface
19 supply of the Project of which they were part.

20 MS. COLEMAN: We'll leave it there on
21 this topic.

22 JUDGE MELLOY: Let me just follow up.
23 Do I understand you to be saying that to the extent
24 pumping would effect surface water, that would be a
25 matter of concern?

1 THE WITNESS: I think that they needed
2 -- they felt they needed to understand that, Your
3 Honor, yes.

4 **JUDGE MELLOY:** All right. We'll -- the
5 witness can be excused subject to recall at a later
6 time. Let me just make a couple comments. You made
7 some statement about Mr. Hoffman -- his
8 cross-examination being completed, Ms. Atton. I'm not
9 going to make any ruling on that at this point, and
10 certainly that may depend to some extent on whether or
11 not you redirect, but I'm just not going to make a
12 ruling on that at this point yet. There is one
13 exhibit issue I wanted to take up aside from the
14 exhibits we have to resolve for Dr. Miltenberger. The
15 sheets that were filed represented that Joint Exhibit
16 430, which is also US-472, had been admitted. Our
17 records do not show that that exhibit has, in fact,
18 been admitted. I assume it's not objected to since
19 it's a joint exhibit, and for your information, I
20 looked at it. It's the 1919 engineering report on
21 water supply and project area, high line canal
22 construction, power development, and city water supply
23 from storage. I think there was testimony about it so
24 unless there's any objection, I will admit that
25 exhibit.

1 **MR. HOFFMAN:** No objection.

2 **JUDGE MELLOY:** All right.

3 **MS. ATTON:** Your Honor, if I may --

4 **MR. SOMACH:** For a moment with respect
5 to --

6 **JUDGE MELLOY:** Just a second,
7 Mr. Somach. Let me finish. So that exhibit is
8 admitted. As far as the Miltenberger exhibits are
9 concerned, it's been a long day. I'm going to take
10 that up tomorrow first thing, and we'll go over those
11 exhibits at that time and try to reconcile what's --
12 what's in evidence and what isn't.

13 All right. Go ahead, Mr. Somach.

14 **MR. SOMACH:** I just -- I wanted -- we're
15 -- I understand the witness' unavailability because
16 she's getting on a plane. I don't understand why she
17 can't be available by Zoom from wherever she's going
18 to be, because waiting a month and breaking up the
19 cross-examination by a month just seems unreasonable
20 unless there's some specific reason why she can't be
21 available by -- by Zoom. And I -- I just don't want
22 to leave it tonight without some idea of when the
23 cross-examination of Dr. Stevens will -- will be able
24 to resume.

25 **MS. COLEMAN:** The United States joins in

1 a request for New Mexico to tell us immediately when
2 Dr. Stevens is available.

3 **JUDGE MELLOY:** Ms. Atton?

4 **MS. ATTON:** So, Your Honor, I don't want
5 to misspeak so if we could just take two minutes so I
6 could speak to Dr. Stevens and ascertain her
7 availability, I would appreciate that.

8 **JUDGE MELLOY:** All right.

9 **MS. ATTON:** And before we -- before we
10 do that just quickly, just housekeeping, I believe I
11 moved Stephens Demonstrative No. 15 into evidence, but
12 I've been informed that I may not have done that, and
13 if I didn't, I do move now to admit Stevens
14 Demonstrative No. 15 into evidence.

15 **MR. HOFFMAN:** No objection from Texas.

16 **JUDGE MELLOY:** All right. Exhibit 15 is
17 admitted. All right. We'll take a couple of minutes.

18 (Recess.)

19 **JUDGE MELLOY:** All right. Where are we,
20 Ms. Atton?

21 **MS. ATTON:** Thank you, Your Honor. So I
22 just want to be clear, I understand that it may have
23 been misunderstood. I wasn't saying it would take a
24 month, it's just with the week's break that I
25 understand we have next week, we are necessarily into

1 November. So Dr. Stevens unfortunately is unavailable
2 tomorrow and Friday because she is traveling on
3 airplanes for those times, and she is back and could
4 be available to follow the next New Mexico witness,
5 which we would expect would finish testifying perhaps
6 on Monday, the 1st.

7 **JUDGE MELLOY:** All right. Let's do
8 that. And -- all right. We'll do that. Anything
9 else we need to talk about tonight now that -- your
10 next witness is going to be Schmidt-Petersen; is that
11 right?

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

13 **JUDGE MELLOY:** Who's going to take that
14 witness?

15 **MS. ATTON:** For the State of New Mexico?

16 **JUDGE MELLOY:** Yes.

17 **MS. ATTON:** It is going to be
18 Mr. Wechsler.

19 **JUDGE MELLOY:** Okay. And then what I'm
20 going to do in the morning before we start with --
21 with that witness, Mr. Somach, I'm going to take up
22 your motion to exclude witnesses, and I'm going to
23 take up the exhibits from Dr. Miltenberger, and if
24 there's any other procedural matters, we'll take care
25 of those in the morning. Otherwise, we'll plan to

1 resume the cross-examination of Dr. Stevens after we
2 finish with Schmidt-Petersen.

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

4 **JUDGE MELLOY:** If nothing else, then
5 we'll see everybody in the morning. Thank you.

6 (The proceedings adjourned at 5:11 p.m.)

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