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IN THE SUPERIOR COURT OF THE STATE OF ARIZONA

3

IN AND FOR THE COUNTY OF MARICOPA

4

5 FLOOD CONTROL DISTRICT OF)

MARICOPA COUNTY,)

6

Plaintiff,)

7

CV 97-07081

v.)

8

PALOMA INVESTMENT LIMITED)

9

PARTNERSHIP, limited)

Partnership, et al.,)

10

Defendants.)

11

and related cross-actions.)

12

13

14

15

16

DEPOSITION OF DOUGLAS R. LITTLEFIELD, Ph.D

17

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19

20

Phoenix, Arizona

May 25, 2001

21

9:33 a.m.

22

COPY

23

CONDENSED

Melissa Gonsalves, RMR

Arizona CCR No. 50070

24

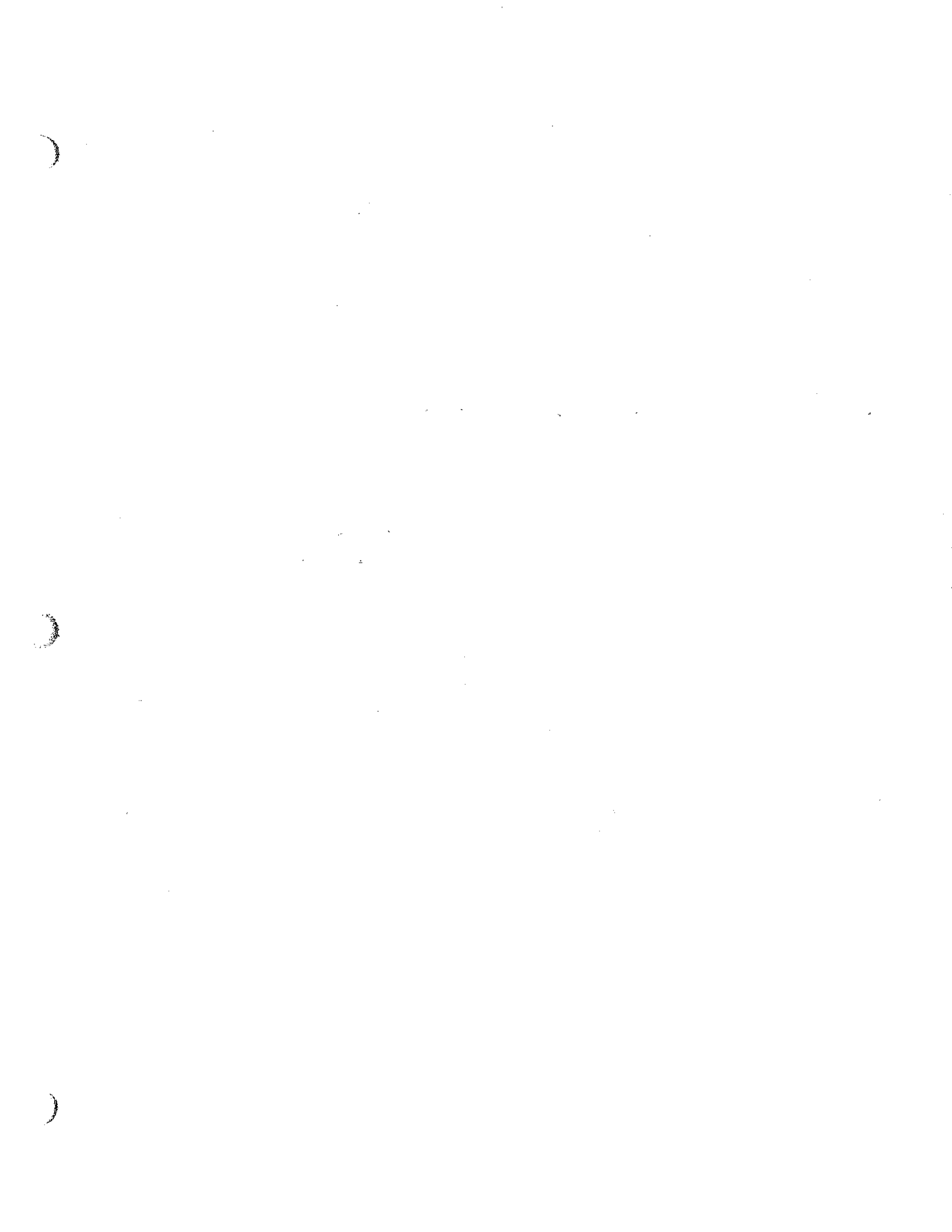
Maricopa County, Lower Salt River

03-005-NAV

4/7/03

Evidence Item No. 039

25



Deposition of Douglas R. Littlefield, Ph.D.

Volume I - Taken May 25, 2001 - 9:30 a.m.

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4

1 Phoenix, Arizona
 2 May 25, 2001
 3 9:33 a.m.

4 MR. HELM: We stipulate to advise the court
 5 reporter how we want the exhibits numbered at a later
 6 date, and you'll change the numbers from the numbers we
 7 put on them today to make they correspond with what we
 8 advise you.

9 MR. BARKER: So stipulated.

10 DOUGLAS R. LITTLEFIELD, Ph.D,
 11 called as a witness herein, having been first duly
 12 sworn, was examined and testified as follows:

13 EXAMINATION

14 BY MR. HELM:

15 Q. State your full name for the record, please.
 16 A. My name is Douglas Robert Littlefield.
 17 Q. Where do you reside, Mr. Littlefield?
 18 A. Live in Oakland, California.
 19 Q. Can you give us an address in Oakland where
 20 you can be reached at any time for the next couple of
 21 years, if necessary?
 22 A. It would be 6207 Snake Road in Oakland. Zip
 23 is 94611.
 24 Q. Mr. Littlefield, have you ever had your
 25 deposition taken before?

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3

1 THE DEPOSITION OF DOUGLAS R. LITTLEFIELD,
 2 Ph.D, was taken at 9:33 a.m. on May 25, 2001, at 2801
 3 West Durango, Phoenix, Arizona, before MELISSA
 4 GONSALVES, Arizona CCR No. 50070, a Certified Court
 5 Reporter and Notary Public in and for the County of
 6 Maricopa, State of Arizona, pursuant to the Rules of
 7 Civil Procedure.

8 The Plaintiffs were represented by their
 9 attorneys, Mr. John D. Helm and Patricia L. Barfield.

10 The Defendants were represented by their
 11 attorney, Mr. J. Emery Barker.

12 Also attending the deposition:
 13 Winn Hjalmarson
 14 Doug Stover
 15 Joe Tram
 16 Ed Raleigh
 17 Julie M. Lemmon, Attorney at Law

18 BE IT REMEMBERED that the witness will read
 19 and sign the deposition, and the notice of filing and
 20 other formalities required by law for the taking and
 21 returning of the said deposition are waived.
 22
 23
 24
 25

PAGE 5

5

1 A. Yes, I have.
 2 Q. How many times?
 3 A. I believe three other times.
 4 Q. Okay.
 5 So you are somewhat familiar with the process?
 6 A. Yes, I am.
 7 Q. Have you had an opportunity to talk to
 8 Mr. Barker about how we conduct the process in Arizona?
 9 A. Other than that there is a rule regarding the
 10 length of the deposition, but other than that, no.
 11 Q. If you don't understand any question that I
 12 ask you, please advise me.
 13 A. Okay.
 14 Q. It won't trouble me, because, I want to be on
 15 the same wavelength, and I want you to understand my
 16 question, because I'm going to assume if you answer a
 17 question that your answer is responsive to the question
 18 I ask.
 19 Is that fair?
 20 A. That's fair.
 21 Q. You understand you're under oath?
 22 A. Yes.
 23 Q. And your testimony today would be just like it
 24 would be if you were in a courtroom?
 25 A. Yes.

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1 Q. Okay.
 2 Let me show you Exhibit Number 90, and I'd ask
 3 you to read that letter.
 4 (Exhibit 1 was marked for identification and
 5 subsequently remarked as Exhibit 90.)
 6 A. Okay.
 7 Q. Mr. Littlefield, have you ever been given a
 8 copy of this Exhibit 90 before today?
 9 A. Yes, I was faxed a copy of it.
 10 Q. Who did you receive a copy of it from?
 11 A. Mark McGinnis, the author of the letter.
 12 Q. Have you had an opportunity to talk to
 13 Mr. McGinnis regarding the statements contained in that
 14 exhibit?
 15 A. Not since the letter was faxed.
 16 Q. Are the requirements that he imposes upon you
 17 contained in that letter going to interfere in any way
 18 with your ability to testify in this matter here today?
 19 A. I'm not sure I understand what you are asking.
 20 Q. Well, let me see if I can clarify it for you.
 21 If you note down in the second-to-last
 22 paragraph, Mr. McGinnis states:
 23 "Therefore, SRP's position is that any
 24 work performed by Dr. Littlefield under
 25 contract with this firm and any

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1 If I ask you to tell me what instructions you
 2 received to prepare that report, what your arrangement
 3 with SRP and what information they told you, are you
 4 going to respond to me in any fashion other than tell me
 5 I can't tell you about that?
 6 A. You are correct. I cannot tell you about
 7 that.
 8 Q. Are you going to be able to tell me about any
 9 documents that SRP furnished you?
 10 A. Other than the ones that are cited in my
 11 footnotes, I cannot tell you about any other documents.
 12 Q. You're not going to tell me about any
 13 information that SRP furnished you to help you prepare
 14 this report?
 15 A. That's correct.
 16 Q. Is there information that you used in the
 17 preparation of your report that was provided by SRP?
 18 A. I believe I've reread the report a couple of
 19 times since I started working on this project. I
 20 believe there is at least one document, if not several
 21 of them, that are cited in the footnotes of the report
 22 as having come from SRP, and they are identified as such
 23 in those footnotes.
 24 Q. And you can't tell me or won't tell me about
 25 anything in those documents at this point?

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1 communication between Dr. Littlefield and
 2 this firm or SRP are covered by the
 3 attorney-client privilege and the work
 4 product doctrine."
 5 Do you understand that?
 6 A. Yes.
 7 Q. "SRP will not be represented at the
 8 deposition only because you object to my
 9 attendance. SRP does not, however,
 10 intend to waive any privilege or work
 11 product that would otherwise apply to
 12 Dr. Littlefield's work for this firm or
 13 his communications with SRP or its
 14 counsel."
 15 Now, is the strictures that that puts on you
 16 going to prohibit you from telling me anything about the
 17 report that you prepared for SRP and which has been
 18 submitted in this matter and which you are here to
 19 testify about today?
 20 A. I can comment about the report and the
 21 contents of the report and also about the documents that
 22 are cited in the footnotes, and that's pretty much as
 23 far as my understanding of what this letter means,
 24 that's pretty much the limit of what I can testify to.
 25 Q. Let me give you a "for example."

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1 A. The documents that are cited in the footnotes
 2 have all been provided to you or are readily available
 3 in the university library.
 4 Q. You are not going to tell me about the
 5 documents that you reviewed that SRP provided you but
 6 which you didn't reference in the report?
 7 A. That's correct.
 8 Q. You're not going to tell me about any
 9 conversations you had with anybody working for SRP or an
 10 agent of SRP regarding any instructions on what you were
 11 to do in the preparation of this report?
 12 A. That's correct.
 13 Q. Is Mark McGinnis your lawyer?
 14 A. My personal attorney?
 15 Q. Uh-huh.
 16 A. No.
 17 Q. Do you know what attorney-client privilege he
 18 is referring to, then?
 19 A. I believe my understanding is that the
 20 attorney-client privilege is between his law firm and
 21 SRP.
 22 Q. You have no attorney-client privilege with
 23 Mark McGinnis?
 24 A. Not personally, no.
 25 Q. I take it also as we go through this

1 deposition, any time I ask you a question that might
 2 relate to something that you looked at or considered
 3 that was furnished to you by SRP or told to you by SRP,
 4 you're not going to continue to discuss it with me?
 5 A. Other than what's cited in the footnotes or
 6 the text of my report, that's correct.
 7 Q. Were you granted permission from SRP to act as
 8 an expert in this matter?
 9 A. Yes, I was.
 10 Q. At the time they granted that permission to
 11 you, did they tell you that you could not disclose the
 12 documents that you had reviewed that they had provided
 13 you?
 14 A. First, let me clarify one thing.
 15 It wasn't SRP directly that granted me
 16 permission, it was SRP's outside counsel, Salmon, Lewis
 17 & Weldon.
 18 Q. Who did you work for originally that gave rise
 19 to this relationship with SRP or Salmon, Lewis & Weldon?
 20 A. John Weldon at Salmon, Lewis & Weldon.
 21 Q. That's who you went to to get permission to
 22 act as a expert in this case?
 23 A. The process was after Emery Barker called me,
 24 I advised him that I had done this for SRP, and he
 25 communicated with Salmon, Lewis & Weldon.

1 all of the materials you had reviewed to prepare your
 2 report?
 3 MR. BARKER: I'm going to object to the form
 4 of the question as misleading.
 5 All of the materials that Dr. Littlefield
 6 reviewed are disclosed in the report in the bibliography
 7 of the report.
 8 The question is misleading as stated.
 9 MR. HELM: That's fine.
 10 Answer the question, your Honor --
 11 Answer the question, Doctor.
 12 THE WITNESS: I'm flattered.
 13 All of the materials that I reviewed are cited
 14 in the bibliography of the report. It is a listing of
 15 all files of archival holdings and secondary source
 16 materials that I looked at.
 17 (Exhibit 2 was marked for identification and
 18 subsequently remarked as Exhibit 91.)
 19 BY MR. HELM:
 20 Q. I will show you what's been identified as
 21 Exhibit 91 to this matter.
 22 Have you ever seen that letter before?
 23 A. (Witness reviews document.)
 24 Q. Have you had an opportunity to read the
 25 letter, Doctor?

1 Q. Did you talk to anyone at Salmon, Lewis &
 2 Weldon or did Mr. Barker get permission for you?
 3 A. He got permission for me. I subsequently
 4 called John Weldon and discussed the matter with him to
 5 confirm what I could and could not do.
 6 Q. What did he tell you?
 7 A. He told me that I could discuss the report,
 8 because it was in the public domain, and that they were
 9 willing -- after he had discussed with SRP's counsel,
 10 they were willing to also allow me to provide copies of
 11 the materials that are in the footnotes of the report,
 12 which my understanding is that's been done.
 13 Q. And...
 14 A. But anything beyond that, he said I was not
 15 free to comment on.
 16 Q. Did you advise Mr. Barker at the time you
 17 undertook the representation in this case, that you were
 18 not going to be free to comment on any of the materials
 19 that you had reviewed for preparation of your report
 20 that were not listed in the footnotes in the report?
 21 A. That's correct.
 22 Q. And he knew that?
 23 A. Yes.
 24 Q. So at the time he listed you as an expert in
 25 this matter, he knew that you couldn't fully disclose

1 A. Just about.
 2 Yes, I've seen this before.
 3 Q. Now, in that letter, it notes that you
 4 reviewed many items.
 5 In the second paragraph:
 6 "He reviewed many items, which he did not
 7 cite in his footnotes, about 25 boxes of
 8 materials..."
 9 Is that statement true?
 10 A. Yes.
 11 Q. So, those 25 boxes of materials that you
 12 reviewed are not listed in your report, are they?
 13 A. They are listed in the bibliography. Those
 14 are all of the materials that I looked at. The 25 boxes
 15 are a subset of all of the materials that I looked at.
 16 MR. HELM: Let's get this marked.
 17 (Exhibit 3 was marked for identification and
 18 subsequently remarked as Exhibit 92.)
 19 BY MR. HELM:
 20 Q. Okay, Doctor, this is Exhibit 92.
 21 It's your report. You've got your own copy in
 22 front of you, I see. If you want to use that, that's
 23 fine with me.
 24 Would you show me where the 25 boxes of
 25 materials are listed in your report?

1 A. Beginning on page 132 is a section entitled
2 "Appendix A." It is a listing of all of the materials
3 that I looked at prior to preparing the report.
4 The 25 boxes of materials are materials out of
5 all of these boxes or out of all of these collections
6 that I chose to have photocopied for later review
7 in-depth.
8 Q. Where are they listed?
9 A. They are not listed directly as the 25 boxes,
10 but they are contained within all of these materials.
11 Q. There's 25 boxes that got stuff in them;
12 right?
13 A. Right.
14 Q. I don't know what the stuff is. If I want to
15 find that stuff, how am I going to do it?
16 A. You would need to go through all of the
17 materials that are listed in the Appendix A.
18 Q. So give me -- if I just took Appendix A and
19 put a subpoena on top of it and handed it to SRP, would
20 I get all of the documents that they provided you?
21 A. Would you rephrase the question?
22 Q. Sure.
23 If I took Exhibit A, hung a subpoena on it and
24 sent it over to SRP, would they give me all of the
25 documents that you reviewed that they provided you with?

1 you're not going to tell me anything about, so that I
2 can get my hands on those documents to review them by
3 subpoenaing SRP for them? I'm just trying to find out
4 how to collect the information that I perceive I'm
5 entitled to get since you and your client have refused
6 to provide it to me. And I think I'm entitled to do
7 that, and I think I'm entitled to have you identify for
8 me what the material is.
9 A. It is impossible for me to say that in those
10 25 boxes of material that I chose to have photocopied --
11 there's no way I would know which of those materials
12 fall under any one of these headings here. They are
13 from some of the headings here. All of the materials in
14 those 25 boxes fall within this Appendix A, but where
15 they fall, I don't know.
16 Q. How am I going to know what documents you
17 won't talk to me about?
18 A. I guess you'll have to take --
19 Q. Am I going to have to say did you look at each
20 one of them?
21 A. I guess you'll have to take it up with Salt
22 River Project. I've tried to explain this as best I
23 can. This is a listing of everything I looked at. Some
24 of which I photocopied and wound up in those 25 boxes.
25 Q. Why, if you photocopied them from other

1 A. You would be subpoenaing a substantially
2 longer list of materials than they have possession of.
3 Q. Okay.
4 Why don't you go through here and identify for
5 me on the record each document that was provided by SRP
6 to you.
7 A. Each document that was provided to me?
8 Q. Uh-huh.
9 A. I believe there is a section here, I'm not
10 positive, I haven't looked at it in a while, but I
11 believe there is a section that lists SRP --
12 Q. Salt River Project archives?
13 A. Yeah, correct.
14 I'm not sure where the page might be on that,
15 but if it is --
16 Q. That shows documents.
17 You've got 25 boxes?
18 A. Which page are you looking at?
19 Q. Page 135.
20 A. These items are not individual documents.
21 This is a listing of collections and file titles. So
22 there may be many documents within those files. It is
23 not an individual document listing.
24 Q. Doctor, how am I going to tell what documents
25 are referenced in the 25 boxes that you reviewed that

1 sources, do you consider those to be SRP's proprietary
2 materials?
3 A. They aren't.
4 You can go to any of these archives and look
5 at these materials yourself.
6 Q. Okay.
7 Why are you refusing to give me a copy of
8 them?
9 A. I don't have them. They are in the physical
10 possession of SRP.
11 Q. These are not documents that SRP gave you,
12 then?
13 A. Only the ones that are listed, the files that
14 are listed under Salt River Project archives on page 135
15 are the materials that I had photocopied from their
16 archives.
17 Q. The rest of the stuff is stuff you got
18 somewhere else, when you finished your job, you boxed up
19 and sent to SRP without keeping a copy of it?
20 A. Everything except for the copies of the
21 materials that are listed in my footnotes. I did keep
22 copies of the materials cited in my footnotes and those
23 have been provided to you.
24 Q. With the exception of the four listings on
25 page 135, then, none of the documents that SRP has and

1 which you won't talk to me about because you consider
2 them to be proprietary, actually came from SRP; they
3 came from you and you gave them to SRP; is that correct?
4 A. The other materials that are listed here came
5 from the archives that are cited, and to clarify, these
6 are things that I looked at, but I may or may not have
7 actually photocopied them. In some cases I did. In
8 some cases I didn't. I don't remember which things I
9 had photocopied, which files, and which ones I didn't.
10 But I -- some of them I did have photocopied
11 and those are what are in the 25 boxes at SRP.
12 Q. I understand, Doctor.
13 We feel that we're entitled to look not only
14 at the stuff that you cited, obviously, that presumably
15 supports your position, but we get to look at the stuff
16 you didn't site that might not support your position and
17 ask you why you didn't put that in your report, all
18 right?
19 A. Everything that I looked at is listed in
20 Appendix A, and you can go to those archives and look at
21 all of that material.
22 Q. And it is all contained or most of it is
23 contained in the boxes you gave to SRP; right? To the
24 extent you had them photocopied?
25 A. No, to the extent I had them photocopied, but

1 the question. If it is going to take you two hours,
2 we'll note that on the record.
3 MR. BARKER: There's page 113, because there
4 is the transmittal.
5 THE WITNESS: Yeah.
6 (Witness reviews Exhibit 92.)
7 From a quick review, it would appear that it
8 is complete.
9 BY MR. HELM:
10 Q. Now, Doctor, besides the 25 boxes, it refers
11 to databases, Dbase4.
12 Do you recall that?
13 A. That's correct.
14 Q. What are those?
15 A. Those are databases where I organize my
16 research materials.
17 Q. Do you still have those?
18 A. I have copies of them, yes.
19 Q. And you are refusing to produce those?
20 A. That's correct.
21 Q. So that's where I could look and see how you
22 perceived things and kind of what your thought processes
23 were?
24 A. It's notes on the documents that -- it is
25 abstracts of documents that led, ultimately, to the

1 I looked at a great deal of material than I had
2 photocopied. The 25 bankers boxes is a subunit of the
3 material that's listed in Appendix A.
4 Q. But in any event, all of it is listed in
5 Appendix A?
6 A. Everything I looked at to the best of my
7 knowledge. I tried to keep track of it, yes.
8 Q. Okay.
9 Calling your attention to Exhibit 92, if you'd
10 take a look at this copy, now, I just want you to go
11 through it to make sure it is a complete copy.
12 If there are things missing from it, please
13 identify it for us to the best of your ability.
14 MR. BARKER: I have a question for the record.
15 Did you get page 113?
16 MR. HELM: Yeah, I hope it got put in there.
17 Did I?
18 MR. BARKER: That was the one that we didn't
19 have a copy of.
20 MR. HELM: Right.
21 THE WITNESS: How much time do you want me to
22 spend looking through this? Do you want me to thumb
23 through it?
24 BY MR. HELM:
25 Q. Enough so that you're comfortable answering

1 preparation of the report.
2 Q. It could be your comments on some document you
3 read, in other words?
4 A. In general it doesn't contain my personal
5 comments. Generally they are simply abstracts of the
6 factual material contained in the document.
7 Q. Your abstract of them?
8 A. Right.
9 Q. So if we wanted to see what you thought a
10 document meant, we would need to look at that abstract?
11 A. I don't know whether you would or would not.
12 It is what I used to produce the report.
13 Q. Let me give you a "for example."
14 I'm not saying you did it this way, but if you
15 abstracted something and forgot to put in a "not" or
16 something like that, when you later looked at it to
17 write your report, you might come up with a completely
18 different conclusion than what the document actually
19 said; correct?
20 A. You could go back and compare the abstracts to
21 the documents as I prepared the report.
22 Q. So you had all of the documents listed in your
23 appendix?
24 A. Those are files containing documents, not
25 individual documents. But the documents themselves are

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1 in those files, in the original archive.
2 Q. I understand -- I guess I don't understand,
3 then.
4 What I thought you said was you abstracted
5 documents --
6 A. Correct.
7 Q. -- and then when you wrote your report, you
8 went back with the abstract and checked it against the
9 original document again?
10 A. Yes.
11 Q. Okay.
12 Did you have every document in your office?
13 A. Yes, I did.
14 Q. Okay.
15 So the ones that you didn't send to Salt
16 River, you just threw away?
17 A. No, I sent all of it to Salt River but that
18 took place substantially after I completed the report.
19 Q. Is the description of the four databases
20 that's contained in Mr. Barker's letter substantially
21 correct?
22 A. There's actually a fifth database that he
23 forgot or I didn't tell him about, but it simply
24 contains a list of contacts of parties that I talked to
25 as I did my research, names and phone numbers of

PAGE 24 24

1 than the case you worked on for SRP and this case, is
2 the only case involving issues of navigability that
3 you've ever worked on the one for the Idaho Coalition or
4 Idaho AG?
5 A. That's not correct.
6 Q. What other ones have you worked on that
7 involve issues of navigability?
8 I'm just talking about lawsuits now.
9 A. Right.
10 I'm trying to find it for you.
11 Again, on page 2, the bottom item, research
12 historian and consultant for Carlsmith, Ball, Wichman,
13 W-i-c-h-m-a-n, Murray, Case, C-a-s-e, Mukai, M-u-k-a and
14 Ichiki, I-c-h-i-k-i, for a law firm representing Nickel
15 Enterprises, regarding a past case of the Kern River,
16 K-e-r-n. That was a lawsuit involving title to the bed
17 of the Kern River and navigability.
18 Q. Okay, so you've worked on two other ones,
19 then?
20 A. And also the very first one chronologically on
21 page 3, the very last one that's listed, under the 1984
22 through '86, research historian and consultant for Legal
23 Counsel, State of New Mexico, involving the history of
24 the Rio Grande water rights. That also involved
25 navigability issues.

PAGE 23 23

1 archivists, an electronic Rolodex. In general the
2 descriptions that are offered here are correct.
3 Q. Okay.
4 And it is your position that that's the
5 proprietary material of SRP?
6 A. That's correct.
7 (Exhibit 4 was marked for identification and
8 subsequently remarked as Exhibit 93.)
9 BY MR. HELM:
10 Q. I'll show you what's marked as Exhibit 93 and
11 ask you if you recognize that document, Doctor.
12 A. Yes, this is a copy of my resum, or vitae.
13 Q. Is it updated or are there any additions or
14 deletions that need to be made to it?
15 A. Well, of course, the present case that I'm
16 working on now is not on here and the Gillespie dam
17 matter.
18 Q. Anything else?
19 A. On page 2, the -- about the middle of the
20 page, 1995 through present, research historian and
21 consultant for Nebraska Department of Water Resources,
22 that case has settled effective at the end of this
23 month. So I guess you could say 1995 through May of
24 2001. Otherwise, everything else is correct.
25 Q. Okay, Doctor, looking at your resum, other

PAGE 25 25

1 Q. I'm missing that.
2 A. This is page 3, the very last -- right
3 above --
4 Q. Right, got it.
5 A. Above "other professional experience."
6 Q. What did that involve, then? Whether the
7 Rio Grande was navigable?
8 A. Some of the historical cases involved in that
9 involved issues of navigability.
10 Q. Were you called on to testify about the
11 navigability of the Rio Grande River?
12 A. No.
13 Q. What did you do? You read cases about the
14 Rio Grande that dealt with --
15 A. I brought a history of the interstate water
16 dispute between New Mexico and Texas and some of that
17 history involved issues of navigability.
18 Q. How so?
19 A. Rio Grande Dam and Irrigation Company v. U.S.
20 cases, there are about three of them that went to the
21 U.S. Supreme Court, and they hinge to some degree on the
22 navigability of the Rio Grande in that region of the
23 American west.
24 Q. So in terms of lawsuits, where you testified
25 as an expert witness, you have only been involved in

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26

1 one; am I right?

2 A. In terms of lawsuits; that's correct.

3 Q. In terms of other experience regarding issues

4 of navigability, you've got the Rio Grande stuff --

5 A. There is one other one as well.

6 Q. Which one?

7 A. Let me make sure I get the right one here for

8 you.

9 On page 2, the third item down from the top,

10 1996 through 1998, research historian and consultant for

11 Idaho Attorney General, provided historical research for

12 use in the Snake River Basin Adjudication.

13 That case involved the Deer Flat National

14 Wildlife Refuge which includes islands in the Snake

15 River, and part of the -- part of the matter that was

16 involved, there was the question of title to various --

17 to the islands in relation to accretion and avulsion.

18 Q. And what did you do for the Idaho Attorney

19 General in relationship to navigability issues?

20 A. I provided a written report for the Idaho

21 Attorney General.

22 Q. On accretion and avulsion?

23 A. No, on the issues that were involved in the

24 case, which I'm not at liberty to discuss further than

25 that.

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28

1 things like that, on navigable rivers?

2 A. No, I have not.

3 Q. Or teach a class on navigable rivers?

4 A. No.

5 Q. Ever teach a seminar on navigable rivers?

6 A. No.

7 Q. The contract you have with Salt River Project

8 provides that you'll keep the information confidential

9 and privileged?

10 A. Yes, it does.

11 Q. Now, in your education, did any courses that

12 you took as you related through your three degrees deal

13 specifically with issues in navigability?

14 A. No, they did not.

15 Q. Any of them have that as a section part of the

16 course?

17 A. No.

18 Q. Any courses you've taken that were

19 particularly helpful to you on navigability?

20 A. No.

21 Q. What do you list your current occupation as?

22 A. I didn't hear the question.

23 Q. What do you list your occupation as?

24 A. I'm a historical consultant.

25 Q. Who are you employed by?

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1 Q. But those issues dealt with navigability?

2 A. Some of them did, yes.

3 Q. Okay.

4 Why aren't you at liberty to discuss these?

5 Is it also because you consider that to be the

6 proprietary interests of the Idaho Attorney General?

7 A. My contract specifies that -- with the Idaho

8 Attorney General that what I provided to them was

9 confidential and attorney work product.

10 Q. Can you tell us what you're currently doing

11 for the Idaho Attorney General?

12 A. Other than what's listed on my resum, I

13 cannot tell you anything further about it.

14 Q. Is that going to be your position with respect

15 to any of these listings here that because you work for

16 private people, you're not going to tell us about what

17 you're doing for them?

18 A. Other than what's listed on my resum, that's

19 about the extent of what I can tell you.

20 Q. Have you written books on navigable rivers?

21 A. No, I have not.

22 Q. Have you ever written any articles on

23 navigable rivers?

24 A. No, I have not.

25 Q. Ever participate in any forums, seminars,

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1 A. I'm self-employed.

2 Q. Are you employed as an individual or do you

3 have a corporation?

4 A. I use the form "Littlefield Historical

5 Research," but I'm not incorporated.

6 Q. Could you give me a brief history of the -- of

7 your employment since you got your bachelor's degree?

8 A. Since my bachelor's degree?

9 Q. Uh-huh.

10 A. The first year after I graduated from Brown

11 University, I taught English in a public school in

12 Providence, Rhode Island.

13 I moved to California after that. Because I

14 had a Rhode Island teaching credential, which California

15 does not reciprocate on teaching credentials, I was

16 ineligible to teach at public schools. I wound up

17 teaching history in a private school in California for

18 four years.

19 I subsequently went back to graduate school at

20 the University of Maryland.

21 As my resum, indicates, I graduated with a

22 master's degree in 1979, and then went from there to the

23 University of California at Los Angeles to work on my

24 Ph.D, and during the time I was at the University of

25 California, Los Angeles, I was an editorial assistant

1 for the Pacific Historical Review.
2 Toward the end of my graduate program at UCLA,
3 I was offered an opportunity to do some consulting work
4 for the New Mexico State Engineer's office. That's
5 listed on my resum.,
6 And the rest of my employment history is
7 listed on my resum.,
8 Q. Does that mean that since 1984, you've been a
9 research consultant or a historical consultant?
10 A. That's correct.
11 I also have taught college level courses
12 intermittently, which are also listed on my resume. I
13 don't remember precisely the exact years, but it is on
14 here anyway.
15 Q. Has it always been as a self-employed person
16 since '84?
17 A. That's correct, except for the college
18 teaching.
19 Q. The '91-'95 lecturer at the department of
20 history?
21 A. That's correct.
22 Q. Did any of the jobs you held before becoming a
23 research consultant in 1984 require you to deal with any
24 issues of navigability?
25 A. No, they did not.

1 Q. Dam construction?
2 A. No.
3 Q. River guide?
4 A. No.
5 Q. Boat builder?
6 A. No.
7 Q. Surveyor?
8 A. No.
9 Q. Assayer?
10 A. No.
11 Q. Have you worked in any capacity in any of
12 those areas?
13 A. No, I have not.
14 Q. Don't claim to be an expert in them?
15 A. No.
16 Q. Who is your client in this matter?
17 A. My understanding of my client is Emery
18 Barker's law firm.
19 Q. Do you have a fee agreement with him?
20 A. Yes, I do.
21 Q. Okay.
22 Do you have a copy of it with you?
23 A. No, I do not.
24 MR. HELM: Emery, will you provide that for
25 me?

1 Q. So the first time you deal with navigability
2 issues is sometime between '84 and '86 when you were
3 working for the New Mexico --
4 A. New Mexico State Engineer?
5 Q. Right.
6 A. That's correct.
7 Q. Do you claim to have any specialized areas of
8 expertise outside of research historian?
9 A. I'm not sure I understand your question.
10 Q. Let me reverse it, then.
11 Do you claim to have any specialized expertise
12 in the area of professional engineering?
13 A. No, I do not.
14 Q. Hydrology?
15 A. No.
16 Q. Hydraulics?
17 A. No.
18 Q. Geomorphology?
19 A. No.
20 Q. Archaeology?
21 A. No.
22 Q. Water engineering?
23 A. No.
24 Q. Irrigation design and delivery?
25 A. No.

1 MR. BARKER: The free agreement is send me a
2 bill, and I'll pay it.
3 MR. HELM: Do you have a letter?
4 MR. BARKER: Someplace.
5 MR. HELM: Will you send me -- do you have
6 written evidence of the agreement?
7 THE WITNESS: Yes, I do.
8 MR. HELM: Somebody send it to me, please.
9 MR. BARKER: I'll send it.
10 BY MR. HELM:
11 Q. Outline the terms of it as best you understand
12 it.
13 A. I'm sorry, I didn't hear the full --
14 Q. Outline the terms of your employment by
15 Mr. Barker's law firm as best you understand it.
16 A. The best I understand it, I charge an hourly
17 rate for research and writing, if that's necessary, and
18 it is \$125 an hour, and for court
19 preparation/depositions and testimony, I charge \$175 an
20 hour, plus reasonable expenses associated with travel
21 and photocopying and the like.
22 Q. Mr. Barker give you any instructions on how
23 you were to perform your services for him?
24 A. No.
25 Q. Anybody else in his law firm give you any

1 instructions?
2 A. No.
3 Q. What's your understanding of what you were
4 hired to do in this matter?
5 A. My understanding was that I was hired to
6 provide an affidavit attesting to the fact that I had
7 written the --
8 Q. Exhibit 92?
9 A. Exhibit 92.
10 And that the information in and my opinions in
11 that report are true and correct.
12 Q. Mr. Barker or anybody in his firm provide you
13 with any documents?
14 A. Yes, they did.
15 Q. Tell me what documents you were provided with.
16 A. I asked for a copy of a land ownership map,
17 which I believe was provided by Wendy McInnis of his
18 firm. I believe she misunderstood what I asked for,
19 because the map that she gave me showed land ownership
20 below the Gillespie dam, and what I really wanted was
21 something showing parcels in the vicinity of Gillespie
22 dam. It was black and white.
23 I also asked for a copy of the Arizona State
24 Land Department study of the Gila River, which the firm
25 provided me.

1 office, and those were not provided because I did not
2 have copies of them because they are secondary source
3 material that's readily available in any good university
4 library.
5 Q. Okay.
6 And we've got a list of that, and we'll get to
7 that.
8 But first of all, would you look through that
9 box, comparing it to the list I gave you, to see if
10 that's an accurate representation of all of the
11 documents that you've produced to me?
12 Let me ask you a question while you do that.
13 The numbers that were on them correspond to
14 the footnote number, I take it?
15 A. Yes, that's correct.
16 With a cursory review, they would appear to be
17 the documents that were -- that I had copies of from my
18 footnotes.
19 (Exhibit 6 was marked for identification and
20 subsequently remarked as Exhibit 95.)
21 Q. Let me show you what's been identified as
22 Exhibit Number 95.
23 That's a list, as best we could compile it, of
24 documents that were not provided to us by Mr. Barker
25 that were referenced in your report.

1 I also asked for a copy of the Gila River
2 Navigability Study Draft Report by ANSAC, and before
3 they were able to provide it to me, I downloaded it
4 myself off the Internet.
5 Q. Has that study, the Gila River Navigability
6 Study, Draft Final Report, been provided to you by
7 Mr. Barker?
8 A. I told them they didn't need to because I had
9 downloaded a copy from ANSAC's web page.
10 MR. HELM: Off the record for a second.
11 (Discussion off the record.)
12 MR. HELM: Okay, back on the record.
13 BY MR. HELM:
14 Q. Dr. Littlefield, I'm going to give you a copy
15 of what I've made.
16 (Exhibit 5 was marked for identification and
17 subsequently remarked as Exhibit 94.)
18 Q. Hopefully it is an accurate index of this box,
19 which is documents that Mr. Barker delivered to our firm
20 a couple days ago, and which are represented to be all
21 of the documents that you referenced in your footnotes.
22 A. I believe I was called by Wendy McInnis, I
23 guess it was, yesterday morning, about some of the
24 documents that were referenced in my footnotes that were
25 not included in the materials that were provided to your

1 Would you review that and see if that's all of
2 them?
3 A. As far as I know, I'll take your word for it.
4 Q. Did you tell Mr. Barker that you were not
5 providing him with these documents?
6 A. At the time that I shipped him the box of
7 copies of my footnotes, I didn't realize that there
8 weren't copies of these materials in there.
9 Q. Do you suspect that all of these materials
10 will be available at the Arizona State University
11 library?
12 MR. BARKER: Off the record.
13 (Discussion off the record.)
14 THE WITNESS: I would imagine you could go to
15 the Arizona State University library web page and find
16 out whether those materials are available.
17 The one exception might be item 115: Gila
18 115, no title, Arizona Gazette, February 17th, 1881, and
19 I have no idea why there was not a copy of that provided
20 to you.
21 It's either in the footnoted materials in
22 Mr. Barker's office or the copy service didn't copy it
23 or, alternatively, I don't have a copy of it and I don't
24 know.
25 Q. What does "LRA" stand for on that?

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1 A. That stands for the box and file in which a
 2 copy of that document appears in the 25 boxes at Salt
 3 River Project.
 4 Q. What do the initials L --
 5 A. Littlefield Research Associates.
 6 Q. Okay.
 7 A. But I changed the title to Littlefield
 8 Historical Research because I felt it more accurately
 9 reflected what I did.
 10 Q. I take it between those documents and the
 11 appendix, that's everything you looked at?
 12 A. These documents in this box are contained in
 13 everything that's listed in the appendix or a subset of
 14 that.
 15 Q. There is no other document in existence that
 16 you looked at that we don't know about?
 17 A. As far as I know; that's correct.
 18 Let me clarify that. I may have looked at a
 19 lot of other materials, but because it's obvious that it
 20 had no relevancy to what my research was, I would not
 21 have listed that in Appendix A. Appendix A is only
 22 materials that I thought might have relevance to the
 23 subject matter.
 24 Q. Did you keep a list of the stuff that you just
 25 discarded out of hand?

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1 historical documents that would shed light on
 2 navigability and because different historical actors
 3 might have defined navigability from their own
 4 perception, I'd simply included what their perception
 5 was or was not regarding navigability.
 6 In other words, there may be many standards
 7 that various historical actors employed.
 8 Q. The eye-is-the-beholder type of problem?
 9 A. Correct.
 10 Q. What I'm referring to, and maybe I should have
 11 said, what legal standard did you measure it against?
 12 A. I did not measure it against a legal standard.
 13 I simply offered an opinion, an expert opinion, based on
 14 the historical evidence.
 15 Q. Okay.
 16 So the report, then, should not be taken as an
 17 opinion, for example, that the Gila River, in terms of
 18 the test of navigability recited in the Daniel Ball
 19 case, is not navigable?
 20 A. The historical records that I cite here, I did
 21 not compare them to the steamer Daniel Ball. I offered
 22 what the historical record presented and offered my own
 23 conclusions based on that.
 24 Q. How do we -- so basically what you're telling
 25 me, if I understand it, is the standard of navigability

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1 A. No, I did not.
 2 Q. I'd ask you to go to your report. If you want
 3 to use your copy, I don't have any problem at this
 4 point.
 5 Emery is familiar with my drill. I intend to
 6 go through it page by page.
 7 MR. BARKER: I told him that you were tedious.
 8 MR. HELM: I know.
 9 That's like you telling me that I don't need
 10 something and making my objections for me.
 11 If you turn to page little Roman numeral vi.
 12 A. Okay.
 13 Q. The first sentence:
 14 "The purpose of this report is to assess
 15 the navigability of the Gila River
 16 between its confluence with the Salt
 17 River downstream to its juncture with the
 18 Colorado River on or before February
 19 14th, 1912, the day Arizona became a
 20 state."
 21 Fair enough?
 22 A. That's correct.
 23 Q. What standard did you use to assess the
 24 navigability?
 25 A. I attempted to examine a multitude of

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1 is your standard, Dr. Littlefield's?
 2 A. It is the standard of all of the historical
 3 parties that -- I'm offering a conclusion based on many
 4 other parties' opinions about what the river was like,
 5 and cumulatively, they say to me that no matter what
 6 standard you use, the river was not commercially
 7 navigable.
 8 Q. Okay.
 9 But you're not opining that in the context,
 10 the legal context, of the federal test for navigability
 11 under which states get or don't get land under the Equal
 12 Footing Doctrine?
 13 A. I'm not an attorney nor a judge, so I wouldn't
 14 attempt to do that.
 15 Q. Okay.
 16 Did you review any case law to try and
 17 familiarize yourself with the standards for navigability
 18 that are used by the federal government?
 19 A. When I first did my navigability study for the
 20 Kern River case, the attorneys in that case provided me
 21 with copies of the steamer Daniel Ball and some of the
 22 other court opinions that have subsequently shed light
 23 on navigability, and I read those cases at that time. I
 24 have not read them since then.
 25 Q. Let me quote to you from -- let me back up.

1 Have you had an opportunity to read the
 2 Defenders of Wildlife and State of Arizona versus
 3 Governor Jane D. Hull case?
 4 A. No, I haven't.
 5 Q. Let me read you a quote from it:
 6 "We hold that, to prove navigability of
 7 an Arizona watercourse under the federal
 8 standard for title purposes, one must
 9 merely demonstrate the following: On
 10 February 14th, 1912, the watercourse, in
 11 its natural and ordinary condition,
 12 either was used or was susceptible to
 13 being used for travel or trade in any
 14 customary mode used on water."
 15 Do you understand what I just read?
 16 A. Yes, I do.
 17 Q. Is it fair to say, then, that we shouldn't
 18 look at your report as being a determination of the
 19 navigability of the Gila River under that specific
 20 standard?
 21 A. My report does not draw legal conclusions. My
 22 report draws historical conclusions.
 23 Q. Okay, but these are factual questions.
 24 A. I'm sorry.
 25 Q. Are you familiar that the test for

1 I wrote my report to offer historical opinions
 2 about what contemporaneous observers felt the river was
 3 like in 1912 or within a few years of that date.
 4 Q. Is it fair to say, then, that at least to a
 5 certain -- did you read the framework that ANSAC, the
 6 Arizona Navigable Stream Adjudication Commission, was
 7 operating under as part of your preparation of the
 8 report?
 9 A. Yes.
 10 Q. And is it fair, then, to say that in your
 11 report, you were trying to present them with information
 12 that those statutes said they were to consider or not
 13 consider?
 14 A. I will rephrase what I think you asked me.
 15 I was attempting to provide information that
 16 would help the Arizona Navigable Stream Adjudication
 17 Commission decide whether the Gila River from the Salt
 18 River to the Colorado was commercially navigable
 19 according to the standards listed in the statute, the
 20 Arizona statute.
 21 I was not attempting to specifically address
 22 those particular points, but rather to provide
 23 information that would allow the Commission to make its
 24 own judgment about whether it met those conditions or
 25 not.

1 navigability is a factual one?
 2 A. Yes.
 3 Q. Okay.
 4 And so that standard I just read to you is a
 5 standard that is applied to the facts?
 6 A. That's correct.
 7 Q. And what I'm asking you, is it fair to say
 8 that your report is not an opinion of the facts based on
 9 that standard that I just read you?
 10 A. I think my report does address that particular
 11 standard as to whether the river was susceptible of
 12 navigation or was capable -- or was navigated for
 13 commercial purposes as of 1912.
 14 Q. That's all I'm asking.
 15 I want to know if that's the standard you
 16 attempted to meet in your report.
 17 A. The standard that I attempted to meet in my
 18 report, my report was written specifically with
 19 reference to the Arizona Navigable Stream Adjudication
 20 Commission, and it was my understanding that they had
 21 certain standards that were set up under Arizona statute
 22 that define navigability.
 23 I did not write my report specifically with
 24 regard to those standards, nor specifically with regard
 25 to the federal test.

1 Q. In the last analysis, that was their decision,
 2 wasn't it?
 3 A. That's correct.
 4 Q. If the Commission standard was different than
 5 the federal standard, should we read your report as a
 6 determination under the federal standard?
 7 A. I don't think my report addresses specifically
 8 either the ANSAC standard or the federal standard. It
 9 is simply information to help make a determination under
 10 either standard.
 11 Q. But it is information with your opinion
 12 attached to it, isn't it?
 13 A. That's correct.
 14 Q. And so if information that would be relevant
 15 to the federal standard determination was left out, how
 16 should we view your report?
 17 A. If it was left out, it was left out simply
 18 because I didn't find it.
 19 Q. When you were doing the Kern River case, what
 20 cases did you review besides Daniel Ball, do you recall?
 21 A. Not specifically by title.
 22 I remember one of the cases that stands out in
 23 my mind because of the novelty of it. It was a case
 24 that involved Alaska and whether planes that ferry goods
 25 into Alaska and land on lakes and rivers, whether that

1 meant those lakes and rivers were commercially
 2 navigable, but I don't remember the name of it or
 3 anything more than that.
 4 Q. Would State of Alaska versus the United States
 5 of America, Donald Hodell (phonetic), Secretary refresh
 6 your memory?
 7 A. It could be.
 8 Q. Should we view your report as an opinion on
 9 the susceptibility of the Gila River to navigation as
 10 opposed to a report of historical facts that you were
 11 able to unearth?
 12 A. It offers a historical opinion as to whether
 13 the river was commercially navigable. As an expert
 14 historian, that is my opinion. It is not a legal
 15 opinion.
 16 Q. You are familiar, then, that you assess rivers
 17 for navigability in the natural and ordinary condition;
 18 right?
 19 A. They believe that's the legal requirement;
 20 correct.
 21 Q. Anywhere in your report, do you assess the
 22 Gila River in its natural and ordinary condition?
 23 A. Not as a legal matter, as a historical matter,
 24 I believe some of my report does address that.
 25 Q. Okay.

1 Q. Tell me what you mean when you use the terms
 2 "commercially navigable" as opposed to "navigable"?
 3 A. My understanding is commercially navigable
 4 means carrying commerce on the river from point A to
 5 point B, the way commerce was conducted at the time of
 6 statehood.
 7 Q. So it is a relative issue. If commerce in
 8 Arizona in 1912 was conducted in steamboats, you would
 9 assess it as commerce in steamboats as opposed to
 10 assessing commerce in Connecticut that was conducted in
 11 canoes?
 12 A. That's right.
 13 Q. And you have assessed it that way in your
 14 report?
 15 A. I've offered the opinions of the historical
 16 parties and cumulatively, that has led me to the
 17 conclusion that appears in my report.
 18 Q. So, I still guess I don't understand.
 19 If I could jump in my bass boat --
 20 A. Your what?
 21 Q. Bass boat. I'm a bass fisherman.
 22 If I could jump in my bass boat, purely
 23 recreational vehicle, and start out at the confluence of
 24 the Salt and the Gila and fish my way to Yuma,
 25 recreating away, that would not meet your definition of

1 Does your report address the Gila River in its
 2 natural condition?
 3 A. My report addresses the Gila River as of 1912.
 4 My understanding is there were already in
 5 place a number of dams either on the Gila or its
 6 tributaries that were already in existence at that
 7 particular point. So, in terms of its natural
 8 condition, if you mean without any kind of structures on
 9 the river, clearly, the river was not in its natural
 10 condition as of 1912.
 11 Q. And so your report shouldn't be viewed as
 12 assessing navigability in that natural condition?
 13 A. No, I was told that I was to address what the
 14 river was like as of 1912.
 15 Q. Okay.
 16 Would it be fair to say that it shouldn't be
 17 presumed to determine that your report assesses the
 18 river without any diversions that were also taking place
 19 in the water in the river?
 20 A. That's correct.
 21 Q. So your report hasn't assessed the natural and
 22 ordinary condition of the Gila River as to whether it
 23 was navigable, if there were no diversions and if there
 24 were no manmade obstructions?
 25 A. That's right.

1 commercially navigable; is that fair?
 2 A. That's fair.
 3 Q. If I could take a 20-foot boat and just cruise
 4 down the Gila for the enjoyment of looking at the
 5 sights, that wouldn't meet your definition of
 6 commercially navigable?
 7 A. That's correct.
 8 Q. And your report is written with your
 9 definition of commercially navigable as part of your
 10 standard; right?
 11 A. That's correct.
 12 Q. If it wasn't commercially navigable, then it
 13 wasn't navigable in your opinion?
 14 A. That's correct.
 15 Q. And --
 16 A. Simply because boats were used on the river
 17 does not mean it was commercially navigable.
 18 Q. Sure.
 19 That's what I'm getting at.
 20 As opposed to navigable -- I can navigate --
 21 the two examples I've just given you, taking my bass
 22 boat and going to Yuma fishin' is navigation of that
 23 river, isn't it?
 24 A. That's correct.
 25 Q. And floating down it in a 20-foot boat is

1 navigation of that river?
 2 A. That's right.
 3 I believe I offered some examples comparable
 4 to what you're discussing in my report.
 5 Q. But neither one of those have a commercial
 6 component?
 7 A. That's right.
 8 Q. And without that commercial component, in your
 9 mind, it doesn't establish navigability of the river?
 10 A. Navigability or susceptible of commercial
 11 navigation.
 12 Q. I'm not sure I got an answer. Let me try one
 13 more time.
 14 MR. BARKER: Let me object.
 15 You've gotten three answers all the same way.
 16 You've rephrased it each time.
 17 MR. HELM: You don't know what question I'm
 18 going to ask. What are you objecting to?
 19 Tell me the question.
 20 MR. BARKER: Ask your next question.
 21 BY MR. HELM:
 22 Q. I want you to give me your definition of the
 23 difference between commercially navigable and navigable.
 24 A. Commercially navigable, my understanding of
 25 it, is carrying commerce on the river from point A to

1 There's one example where I believe in the
 2 1880s parties set out in some sort of watercraft from
 3 Phoenix intending to float all the way to Yuma, and they
 4 weren't very successful at it, as it turns out, but that
 5 type of -- even if they had been successful and had
 6 simply done it for fun, did not necessarily indicate
 7 that the river was capable of commercial navigation.
 8 Q. Would it indicate that the river was capable
 9 of travel?
 10 A. It would indicate that you could get a boat
 11 down the river, sure.
 12 Q. Okay.
 13 And so if travel is enough, then the river
 14 would be navigable; is that fair?
 15 A. It would be navigable to the extent that there
 16 were craft that had done that.
 17 Q. In that definition that I read to you, I think
 18 we have talked about "natural" condition, but what does
 19 "ordinary" mean to you in that definition?
 20 A. Could you phrase that to include ordinary?
 21 Q. Sure.
 22 In its natural -- the watercourse in its
 23 natural and ordinary condition, either was used or was
 24 susceptible to being used.
 25 A. I really don't know what the word "ordinary"

1 point B, which does not include ferries, because ferries
 2 are a means of avoiding the river at regularly expected
 3 times of the year, or alternately, susceptible of
 4 carrying commerce on the river the way commerce was
 5 carried on at the time of statehood at regularly
 6 expected times of the year.
 7 Q. Does it have to be profitable?
 8 A. Profitable?
 9 Q. Sure, the commerce?
 10 A. Like money-losing commerce?
 11 Q. In other words, if I carry on commerce on the
 12 river but I lose money on it, it wouldn't qualify?
 13 A. No, I would say it would qualify as long as it
 14 is a business venture or a possibility of a business
 15 venture. I don't think a requirement of making money,
 16 being successful at it, is necessary.
 17 Q. You found cases where navigation occurred?
 18 A. On the Gila?
 19 Q. Yes.
 20 A. Yes.
 21 Q. And you didn't think that they established
 22 that the Gila was navigable, because they weren't for
 23 commerce?
 24 A. They did not indicate the susceptibility or
 25 the actual commercial navigation of the river.

1 means in that definition.
 2 Q. Maybe I'm getting overpicky.
 3 I'm trying to wire down that you didn't assess
 4 the river in those terms.
 5 A. That's correct; I did not.
 6 Q. I take it that if we go to the other phrase in
 7 there "being used for travel or trade," the travel must
 8 have been commercial travel if we had a river bus?
 9 A. In order to be defined as commercially
 10 navigable?
 11 Q. Right.
 12 A. Correct.
 13 Q. It is not good enough that John Helm can go
 14 from point A to point B on the Gila River?
 15 A. That's correct.
 16 Q. The trade must have been some type of
 17 commercial nature?
 18 A. And regularly reliable as well.
 19 Q. And "customary mode" means how things were
 20 done in 1912?
 21 A. Right.
 22 Q. I guess in terms of the terminology of your
 23 report, when you use the term "navigable" what we really
 24 should add, then, shouldn't we, is "commercially
 25 navigable"?

1 A. Correct.

2 Q. Can you describe for me from a physical

3 standpoint what the components of a commercially

4 navigable stream would be?

5 A. What the components of it would be?

6 Q. Sure.

7 How deep does it have to be?

8 A. It depends on the date of statehood and the

9 types of watercraft used at that time.

10 Q. How wide does it have to be?

11 Same answer?

12 A. Same answer.

13 Q. How stable does the channel have to be?

14 A. Same answer.

15 Q. I don't understand the "same answer" on that

16 one.

17 A. The stability of the channel would be one

18 factor that I would consider in determining whether a

19 stream was commercially navigable at the time of

20 statehood. It wouldn't be the only one, but it would be

21 one.

22 Q. If the sandbars are created or a channel shift

23 with seasonable flooding, would that disqualify it from

24 being navigable?

25 A. Not necessarily, but on the other hand it

1 means in the context of the Gila River in your report?

2 A. Capable of carrying on commerce the way

3 commerce was carried on at the time of statehood.

4 Q. Well, what would indicate susceptibility? The

5 amount of water?

6 A. We don't have commerce.

7 Q. As I understand it, the susceptibility is for

8 cases where we can't actually go out and look at the

9 commerce; is that fair?

10 A. Right.

11 Q. So we don't have actual commerce taking place,

12 so we could actually say it is navigable, look at, there

13 goes the Queen Mary. So, we got to look at indicia that

14 would indicate that it might be able to be used for

15 commerce; right?

16 A. Right.

17 Q. What are the indicia, in your mind, that one

18 looks at?

19 A. I'm sorry, what word were you using there?

20 Q. Indicia.

21 A. Indicia?

22 Q. Indicators.

23 A. There would be a number of them. There would

24 be how much water was in the river, how wide the river

25 was, how regular the flow was, how deep the flow was.

1 wouldn't make it navigable, either.

2 Q. Mississippi is navigable, we all know that,

3 and we have sandbars that move around all the time out

4 there, don't we?

5 A. Right.

6 Q. How far does one have to commercially navigate

7 up a river to make the river navigable?

8 A. I don't have an answer for that.

9 Q. How do you tell the susceptibility of a

10 commercially navigable river when commerce has never

11 taken place on it before?

12 A. You would look at the characteristics of the

13 river and look at the characteristics of watercraft in

14 existence at that particular time and reach a conclusion

15 having studied the historical record about whether those

16 watercraft could have been placed in that river and used

17 for commerce.

18 Q. All tied to the time of statehood?

19 A. Or as close to that as one can get.

20 MR. BARKER: Can we take a break?

21 MR. HELM: Oh, sure.

22 (Recess ensued from 10:49 to 10:59.)

23 BY MR. HELM:

24 Q. Could you give me your definition or define

25 for me what the terminology "susceptible to navigation"

1 That's a number of them, anyway.

2 Q. Okay.

3 Did you do any research on those specific

4 topics?

5 A. To the extent they appeared in the historical

6 record, yes.

7 Q. So your research was Captain Jones in his

8 diary said there was five foot of water for wherever he

9 was at the time?

10 A. Right.

11 Q. You would then assume there was five foot of

12 water at that point in time?

13 A. Right.

14 Q. What depth would you need to make it

15 commercially navigable in 1912?

16 A. Just depth by itself?

17 Q. Sure.

18 A. I believe I discuss at the end of the report

19 the characteristics of commercial watercraft that were

20 in use in 1912, and they indicated that, at least with

21 regard to steamboats, that some of the steamboats that

22 were being used on the Colorado River around that time

23 drew, I believe -- my recollection is and I'm not

24 positive without going back to look at my report -- but

25 my recollection was that the steamboat drew within a

1 foot and two foot of water. I believe that varied
2 depending on how much tonnage was on board.
3 Q. It would sink deeper the more you put on it;
4 right?
5 A. Right.
6 Q. So, is it fair to say, then, in your looking
7 at the indicia of navigability, we would need at least a
8 foot and a half to two foot of water?
9 A. That would be one of the characteristics.
10 Q. How wide would it have had to have been in
11 terms of the commercial indicia that you were evaluating
12 in 1912?
13 A. Again, I'd refer you to the section of my
14 report that discusses the watercraft. I don't remember
15 the widths of those vessels, but...
16 Q. If I can take one of those vessels, whatever
17 they were, and run it up that river, it'll be
18 commercially navigable in your mind?
19 A. If it could be done at regularly expected
20 times of year and for a reasonable period of time, that
21 would be one of the characteristics I would consider.
22 But, again, this is not a legal opinion, it is
23 a historical opinion.
24 Q. How about if I go down the river in a canoe?
25 Is that an indicator of susceptibility?

1 transactions, were fairly consistent in their opinion
2 that none of the Gila between the Salt and the Colorado
3 was navigable.
4 Q. So, is the answer to my question, no, I didn't
5 look at any specific reaches of the Colorado to
6 determine whether they might be navigable?
7 A. You mean the Gila?
8 Q. Yeah, I'm sorry.
9 A. I looked at the entire reach of the river from
10 the Colorado River to the Salt River.
11 Q. But you didn't look at any individual portions
12 of that stretch?
13 A. I looked at it all, but not limited to any
14 portion or stretches.
15 Q. That's what I meant.
16 For example, if you came across some evidence
17 of a steamboat, for example, plying the lower Gila River
18 on a regular basis for some period of time, albeit, it
19 might not have gotten all the way up to the confluence
20 with the Salt, did you then go and assess that portion
21 of that river to determine whether it might have been
22 navigable?
23 A. There was, in fact, a steamboat that did go up
24 the Gila River from Yuma. I don't know precisely how
25 far or how many times, but I did not specifically base

1 A. Just go down it once?
2 Q. Ten times.
3 A. It would be one of the things I would consider
4 in making a historical determination of susceptibility
5 of navigation.
6 Q. You are aware that an entire river doesn't
7 have to be navigable?
8 A. Yes.
9 Q. In fact, reaches of rivers can be navigable?
10 A. Right, and the further upstream you go,
11 eventually you'll reach a point of any river where it is
12 not navigable by anybody's standard.
13 Q. Even the Mississippi is not navigable by any
14 standard at some point, is it?
15 A. That's correct.
16 Q. How long does a reach have to be?
17 A. That I don't know.
18 Q. When you looked at the Gila River, did you
19 assess it in terms of whether some portion of the river
20 might be navigable versus other portions that aren't
21 navigable?
22 A. I think the particular section of my report
23 discussing the homestead patents and also the General
24 Land Office surveyors' field notes indicate that at
25 least those parties, the parties involved in those

1 any opinion on simply the use of the steamboat on that
2 reach of the river. I cumulatively examined all of the
3 historical record for the entire river.
4 Q. If you had a steamboat that did it for 7
5 years, would that meet your regularity test?
6 A. It would meet a regularity test depending on
7 how regularly it did it, but there would be other
8 factors that I would use in determining from a
9 historical point of view whether the river was
10 susceptible of commercial navigation.
11 Q. On the portion of the river where that
12 steamboat navigated regularly for 7 years --
13 A. Uh-huh.
14 Q. -- what would disqualify -- and I'm assuming
15 the steamboat meets your criteria for 1-1/2 to 2 feet --
16 what criteria would disqualify that river from being
17 commercially navigable?
18 A. How regularly the steamboat was capable of
19 doing that, whether it was successful at doing it,
20 whether there were major obstacles routinely for the
21 steamboat, also what other parties thought about
22 navigation, even on that reach of the river, such as
23 General Land Office surveyors and other parties.
24 Q. You mean -- you mean, you'd allow the fact
25 that some surveyor looked at the Gila River on a given

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1 date, taking into consideration seasonality and
2 diversions and all of the sorts of things that happen to
3 rivers, and said it is not navigable, to override a
4 record of use by a steamboat for 7 years?
5 A. It would be one of the elements I would
6 consider. I would consider the steamboat. I'd also
7 consider the surveyors. I would consider homestead
8 patent files. I'd consider other anecdotes and so
9 forth.
10 Q. My point is, we know there is a steamboat that
11 did that, don't we?
12 A. Yes.
13 Q. And did it for 7 years?
14 A. I didn't know the length of time.
15 Q. It is right in your report.
16 A. Oh, all right.
17 Q. And so --
18 A. Does my report say how often it did it?
19 Q. What I would like to know is how you followed
20 up to determine that that wasn't a successful commercial
21 venture?
22 A. I don't remember the answer to that.
23 Q. In your mind, something overrode that use for
24 7 years by the steamboat?
25 A. Yes, it did.

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1 A. The way I understand it, meandering, General
2 Land Office surveyors would -- when they encountered a
3 river on-line, as they measured township and section
4 range lines, or subsection lines, when they encountered
5 a river that they thought was navigable, they were to
6 plant what was known as a meander post on the bank of
7 the river and then they were to use degree bearings to
8 determine the sinuosities of the river going downstream
9 and planting other meander posts where the stream
10 changed direction and do that on both banks of the
11 river.
12 Q. I'd like you to turn to page 4 of your report,
13 middle of the first paragraph, you refer to 11
14 unpublished manuscripts, collections of prominent
15 citizens.
16 A. You are talking about the carryover paragraph
17 from the previous page?
18 Q. Uh-huh.
19 A. Okay.
20 Q. I would like you to identify the 11
21 unpublished manuscripts for me.
22 A. I'm trying to find where it is.
23 Q. About the middle of that carry-over paragraph.
24 It says:
25 "The preliminary searches yielded over

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1 Q. And you never made any attempt to determine
2 how far up the Gila it went?
3 A. No.
4 Q. Or what kinds of commercial cargos it carried?
5 A. No, I didn't.
6 Q. Or what passengers it carried, if any?
7 A. Right.
8 Q. Is it fair to say -- I'm trying to make a
9 distinction here.
10 It seems to me the more I talk to you, what
11 you were really doing in this report was looking at uses
12 of the Gila River --
13 A. Correct.
14 Q. -- during the time frame that you assessed?
15 A. Right.
16 Q. As opposed to whether it was, in fact,
17 navigable or susceptible of navigation?
18 A. The uses led me to a historical conclusion
19 about whether it was navigable or commercially
20 navigable, not only the uses but the observations of
21 contemporaneous observers.
22 Q. Would you define for me the term "meandering"?
23 A. Meandering, the way I understand it -- you are
24 talking with reference to surveying?
25 Q. Uh-huh.

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1 eleven unpublished manuscript collections
2 of prominent citizens..."
3 A. I assume they would be listed in the
4 bibliography under -- this is Arizona State University.
5 Q. How do I find it?
6 A. I believe the archives are listed in
7 alphabetical order.
8 Q. Arizona State ought to be in the front?
9 A. Yeah, I think so.
10 MR. HELM: My copy of the report seems to be
11 missing page 133.
12 MR. BARKER: So is mine. That's probably why
13 yours is missing it.
14 THE WITNESS: They are listed under the
15 heading "Arizona State University" there.
16 BY MR. HELM:
17 Q. Are you referring to the Joseph and Grace
18 Alexander papers that's on page 132?
19 A. Starting right under the heading "Arizona
20 State University," the Hancock family collection,
21 newspaper index, the Joseph and Grace Alexander papers.
22 Q. They should carry over?
23 A. I would imagine they do.
24 Q. And when Emery gives us the missing pages?
25 MR. BARKER: I don't have it because --

1 THE WITNESS: Are you missing 133?
2 MR. BARKER: I'm missing 133.
3 MR. HELM: Would somebody get me 133?
4 THE WITNESS: I can print one out. I'm sure
5 ANSAC would like it if you sent them one, too.
6 MR. BARKER: I don't know if you know how they
7 make their copies.
8 MR. HELM: I don't want to know.
9 MR. BARKER: They send them to the prisoners.
10 THE WITNESS: I'll just print it out and send
11 it on to you.
12 MR. BARKER: That's why if we find a page
13 missing, it is missing.
14 BY MR. HELM:
15 Q. At the bottom of that last sentence on that
16 same paragraph you state:
17 "The manuscript collections also yielded
18 useful insight on the development of
19 irrigation systems along the Gila,
20 including reservoirs, diversion dams and
21 canals."
22 A. Yes.
23 Q. How do these insights impact on your findings
24 of non-navigability?
25 A. This was just a general statement as to what

1 to San Diego, Upper California, or maybe the Henry Smith
2 Turner diary, the published reports of various parties
3 in the area. Those were --
4 Q. Is it just those two or were there others?
5 A. There may have been others, but I don't
6 recall.
7 The Bancroft Library at the University of
8 California has a -- not only a lot of manuscripts, but
9 one of the best collections of published material
10 dealing with the American west.
11 Q. Okay, referring you to page 7.
12 You state at the bottom of the page:
13 "Federal patents were critical in
14 determining how the U.S. government
15 viewed the public lands in Arizona. If
16 federal officials had considered the Gila
17 River to be navigable, they would not
18 have deeded out land lying in the channel
19 or bed of the river."
20 It goes to the next page.
21 A. I think the phrase to be grammatically correct
22 should have been, "If federal officials had considered
23 the Gila River to have been navigable...", at least
24 that's what I've penciled in here.
25 Q. Okay, well...

1 the collections contained, the fact that there were
2 diversion dams and canals and reservoirs in existence at
3 the time of statehood.
4 Q. Quite a bit of it, wasn't there, by statehood?
5 A. Yes.
6 Q. And I take it that you would agree that the
7 diversions and canals and dams that existed at statehood
8 impacted the flow of the Gila River?
9 A. Certainly.
10 Q. Page 6, please, last sentence in the second
11 paragraph, middle of the page?
12 A. The first full paragraph.
13 Q. Yeah.
14 A. Okay.
15 Q. You have a statement:
16 "... their reports are especially useful
17 to ascertaining..."
18 And I don't know what reports you are
19 referring to, so could you identify the reports that you
20 are referring to that were especially useful?
21 A. Um, that's probably a reference to some of the
22 published material that was in Exhibit 95.
23 For example Gila footnote 104, Philip
24 St. George Cooke, Report of Lieutenant Colonel Philip
25 St. George Cooke of His March from Santa Fe, New Mexico,

1 A. Whatever.
2 Q. I can only deal with what I've got.
3 A. Okay.
4 Q. You don't get to correct your grammar later
5 on.
6 A. Okay.
7 Q. First question is, how do you know this? This
8 is just your assumption, isn't it?
9 A. Because I have seen circumstances where
10 federal surveyors have -- where rivers have been
11 meandered on both banks and title has been granted by
12 the U.S. government to parcels adjacent to those
13 navigable waterways. Title was not granted to the bed
14 of the river.
15 Q. Have you seen the opposite also?
16 A. Where...
17 Q. Where title was granted?
18 A. I don't remember specifically.
19 Q. Do you think it is possible?
20 A. It's certainly possible.
21 Q. Do you think it could have occurred on the
22 Gila River?
23 A. It could have occurred on the Gila River.
24 Q. And they didn't accept the land and the river,
25 even though both sides were meandered?

1 A. That's correct.
 2 Q. So, your speculation on federal officials not
 3 conveying land in meandered rivers is just that, isn't
 4 it? Your speculation?
 5 A. The federal officials at the time that these
 6 surveys were done, the surveys were never 100% accurate,
 7 and also the General Land Offices that handed out
 8 homestead patents also were not 100% consistent with one
 9 another. So there is a degree of inconsistency that
 10 you'll find anywhere in the American west with regard to
 11 meandering and homestead patents that are adjacent to
 12 either navigable or non-navigable bodies of water. It
 13 is one element that I would consider.
 14 Q. There was just -- there was also just the
 15 factor that some of them were never done, even though
 16 they showed up, weren't they?
 17 A. Some of what --
 18 Q. The surveys.
 19 A. I believe all of Gila was surveyed.
 20 Q. So some of the surveys were questionable in
 21 the sense that maybe the surveyor never got out on the
 22 land that he claimed to have surveyed?
 23 A. Oh, correct. That happened all over the west.
 24 Q. Sure.
 25 A. Yeah.

1 Q. And did you do anything to see if any of the
 2 surveys that you relied on might have fallen into what
 3 we might call the fraudulent survey category?
 4 A. Only to the extent that I examined any
 5 resurveys that had been done of any particular township
 6 or part of a township.
 7 Q. We'll get back to that in a minute.
 8 Do you think it would be likely that I could
 9 go out and find a federal patent on the Gila River that
 10 would cover the river where it had been meandered on
 11 both sides?
 12 A. I don't know if it would be likely. I would
 13 certainly think it would be possible.
 14 Q. Wouldn't shock you?
 15 A. It wouldn't shock me, no.
 16 Q. You state that you reviewed, on page 9, 50
 17 state patents?
 18 A. Where on page 9?
 19 Q. First paragraph.
 20 A. Approximately, 50, yes.
 21 Q. Are those listed anywhere?
 22 A. I believe they are listed in Appendix A.
 23 Q. That's the ones on page 166, 161?
 24 A. I'm not sure where you are looking. These all
 25 appear to be federal patents, or State of Arizona -- no,

1 that's not it.
 2 Q. Where are they? Lead me. Here we go. Page
 3 186?
 4 A. Yes, that's it.
 5 Q. That's what what you're referring to?
 6 A. Yeah.
 7 Q. Okay. Now, on page 15, you talk about the
 8 instructions of the Surveyor General?
 9 A. Yes.
 10 Q. And you talk about that quite a bit?
 11 A. Yes.
 12 Q. As they matured from 1851 or whenever it was,
 13 through the course of the surveying; right?
 14 A. 1850 to 1902.
 15 Q. Okay.
 16 First question I would have for you, are you
 17 aware -- and the records I have are 1851, 1855, 1864,
 18 1881, 1890, 1894, 1902 and 1919, all right?
 19 A. Right.
 20 Q. Those are the various sets of instructions
 21 that came out to surveyors?
 22 A. Right, the different manuals.
 23 Q. Right.
 24 And they changed to a degree over time.
 25 A. Right.

1 Q. Fair?
 2 And what I want to know is are you aware in
 3 any of those instructions for any of those years, was
 4 the definition of a navigable stream presented?
 5 A. My report indicates that it never was
 6 presented specifically, only to the extent that it said
 7 "which under the law are navigable."
 8 Q. And that was a specific reference to a
 9 statute, wasn't it?
 10 A. It was codified, I believe, yes.
 11 Q. And that statute doesn't define it, does it?
 12 A. I don't know whether it does or not.
 13 Q. You didn't look at that statute?
 14 A. No.
 15 Q. Let me show you U.S.C. 43-931, and I will avow
 16 to you that that is the statute as we understand it and
 17 as Mr. C.A. White indicates is the statute in question,
 18 and it hasn't been substantially amended.
 19 You don't see any definition of "navigable
 20 stream" in there, do you?
 21 A. Not the specifics of it, no.
 22 Q. So what I'm leading up to is simply that the
 23 determination of what a navigable stream was was in the
 24 discretion of each surveyor that went out there?
 25 A. That's correct.

1 Q. And as far as you know, there were never any
 2 standards set out in any of the manuals that told a
 3 surveyor how to determine that a stream was navigable?
 4 A. That's what C.A. White explains in his book.
 5 Q. You consider that book fairly authoritative?
 6 A. Yeah, my recollection of the introduction is
 7 that Mr. White had worked for some time in the Bureau of
 8 Land Management and therefore had some degree of
 9 expertise on surveying instructions when he compiled the
 10 book.
 11 Q. There's no definition of a navigable stream in
 12 the book. There is no instructions of how to determine
 13 a navigable stream. There are no examples, either, are
 14 there?
 15 A. I don't recall if there are examples. I know
 16 White includes copies of surveyed plats that were given
 17 to the surveyors to illustrate for them how they were to
 18 handle certain situations, but I don't know if
 19 navigability was one specific one or not.
 20 Q. But the survey plat when they showed him how
 21 to squiggle the little line wouldn't?
 22 A. Right.
 23 Q. It wouldn't tell him how to determine that
 24 little line squiggled?
 25 A. Right.

1 Now, I think it was in the 1891 instructions,
 2 but at some point in time, you recall that in addition
 3 to meandering navigable streams, the instructions tell
 4 them to meander streams that are three chains wide.
 5 A. Non-navigable streams that are three chains
 6 and wider.
 7 Q. How long is a chain?
 8 A. You know, at one point I knew. I don't know
 9 right now. I think it is probably in my report,
 10 actually. I just don't recall.
 11 Q. Do you know what a braided river is?
 12 A. It is a river with many channels.
 13 Q. How would a surveyor have applied the chain
 14 rule to a braided river?
 15 A. I don't know.
 16 Q. Is the Gila a braided river?
 17 A. Yes.
 18 Q. Tell me how a -- you recall that in that
 19 three-chain rule there is also a requirement that they
 20 apply to it streams of uniform width? If you want to
 21 look at page 19 of your report, you've got the
 22 instructions set out there.
 23 Do you see that?
 24 A. Uh-huh.
 25 Q. How would you apply the uniform width

1 Q. Safe to say, then, that in terms of a
 2 surveyor's assessment of whether a stream was navigable,
 3 the navigability of the stream was in the eye of the
 4 beholder?
 5 A. I think that they had some degree of
 6 professional training in that context, but as far as
 7 your specific question, I think that's correct.
 8 Q. What professional training do you think they
 9 had?
 10 A. That they were surveyors. They knew how to do
 11 surveying.
 12 Q. What you're saying is that you think -- and
 13 I'll be a little facetious, but in course 101 in
 14 surveying, you get a chapter on how to recognize a
 15 navigable stream?
 16 A. No, I don't think so.
 17 Q. Okay.
 18 So what training did they have that you are
 19 referring to that would help them to pick a navigable
 20 stream?
 21 A. I don't know the specifics for each individual
 22 surveyor.
 23 Q. Well, surveyors in general, as a group?
 24 A. I don't know.
 25 Q. Okay.

1 requirement to a braided river?
 2 A. It's not how I would apply it, it is how the
 3 surveyor would apply it.
 4 Q. I'm sorry, I stand corrected.
 5 How do you perceive that a surveyor would have
 6 applied that to a braided river?
 7 A. It would have depended on the surveyor, what
 8 their opinion of the river was like.
 9 Q. Do you think that uniform width requirement
 10 would apply to the Gila River?
 11 A. Probably not.
 12 Q. How about the three-chain rule?
 13 A. In certain places, yes.
 14 Well, let me correct that. The uniform width
 15 may very well have applied in certain places as much as
 16 the three-chain rule would have applied in some places,
 17 but certainly not everywhere.
 18 Q. Now, could you give me your understanding of
 19 what the definition is of "natural arteries of internal
 20 communication" as that's used in that instruction?
 21 A. I don't specifically have an answer for that.
 22 My assumption would be that it meant that
 23 parties were using the river as a means for roads to
 24 follow along next to them or wagon tracks or things of
 25 that nature, simply as a means of recording where such

1 roads might exist in a river valley.
2 Q. Could they have been traveling up and down the
3 rivers but not in a commercial fashion?
4 A. I don't know know the answer to that.
5 Q. Is that possible?
6 A. It's possible, sure.
7 Q. Did you do any research to determine what
8 "natural arteries of internal communication" meant?
9 A. No, I did not, other than what C.A. White had
10 in his book.
11 Q. There is a lot of meandering that could be
12 classified as natural arteries of internal communication
13 on the Gila River, isn't there?
14 A. Yes, there is.
15 Q. So it would be very important for us to
16 understand what that term meant?
17 A. That's correct.
18 Q. And you agree that it could mean use of a
19 river to travel up or down it or both, to communicate
20 with your buddies down river, but not in a commercial
21 fashion?
22 A. It could mean that, but I think the historical
23 record indicates that there was really very little
24 boating done on the Gila River, and so I would assume
25 what it meant was that it more likely reflected the

1 Q. Does the surveyor have the power to classify
2 land under any law?
3 A. To classify in what way?
4 Q. That it's navigable or not navigable?
5 A. No, I don't believe he does.
6 Q. Is the surveyor's meander anything more than a
7 note and a report on the character of the land as it
8 appeared to him on the date he viewed it?
9 A. That's correct.
10 Q. Are you aware that the capacity of a stream to
11 be navigable may be shown by its physical
12 characteristics and experimentation as well as by actual
13 use?
14 A. Yes.
15 Q. Did you undertake any experiments or
16 assessment of the physical characteristics of the Gila
17 River to determine its navigability?
18 A. As of 1912?
19 Q. Yeah.
20 A. No, obviously not.
21 Are you talking about did I look at it in
22 1912?
23 Q. Well, one way to do it, for example, would be
24 to reconstruct the water that was there from the records
25 of the USGS or the -- do you understand what I mean?

1 presence of the Gila trails, such as described by Odie
2 Faulk, paralleling the river.
3 Q. This is your assumption?
4 A. Yes.
5 Q. Do you believe that if a surveyor meandered a
6 body of water or a stream that that conclusively
7 establishes that that stream or body of water is
8 navigable?
9 A. On one side or both or?
10 Q. Both. Meandered it both sides?
11 A. No, clearly not, because the instructions in
12 one of the manuals provided that it meander on both
13 sides if it is more than three chains wide.
14 Q. If your meandering was done on both sides in a
15 situation where the three-chain rule had not yet come
16 into existence, would you conclude that it was
17 navigable?
18 A. I would conclude it was the opinion of the
19 surveyor that it was navigable, at least in the area
20 that he surveyed.
21 Q. Is that conclusive?
22 A. No.
23 Q. Is a surveyor invested with the power to
24 determine the character of the land he surveys?
25 A. I'm not sure I understand your question.

1 A. No, I didn't do that.
2 Q. If you didn't do that, I take it that it is
3 also safe to assume that you didn't do any experiments
4 or work -- I call them "experiments" but I don't know
5 whether that's really -- I know you are not a scientist
6 with smoke blowing out of little vessels and things like
7 that -- but to put all of the water back in the Gila
8 that had been diverted to determine if it would have
9 been navigable in 1912?
10 A. No, I'm not a hydrologist. That's beyond my
11 expertise.
12 I would assume if parties were interested in
13 that type of information, they would hire someone who
14 has expertise in doing that.
15 Q. Tell me, now, with respect to surveyors, were
16 all of the contracts standard?
17 A. I don't know the answer to that question.
18 Q. Okay.
19 Were all the instructions that they operated
20 under standard?
21 A. I do know about contracts that the amounts of
22 money that they were paid varied from surveyor to
23 surveyor and year to year, and in general, they were
24 paid a higher rate per mile for meanders than they were
25 for surveying straight lines, but beyond that -- I've

1 seen a lot of surveyors' contracts, but I just don't
 2 remember the details of them.
 3 Q. What I'm getting at, for example, did all
 4 surveyors operate under the same set of instructions,
 5 you know, the 1891 set or -- for the time frame we're
 6 dealing with?
 7 A. I don't know.
 8 Q. Are you aware whether any surveyors were given
 9 special instructions?
 10 A. Yes, sometimes surveyors were, but I don't
 11 know whether it applied to surveyors in the Gila River
 12 area.
 13 Q. You didn't check whether the surveyors in the
 14 Gila River area were either some of them, all of them,
 15 one of them, none of them, given any special
 16 instructions on how to do their surveys?
 17 A. No, I did not.
 18 Q. In reference to surveyors' field notes, were
 19 they always prepared at the exact time that the survey
 20 of that area was going on?
 21 A. The notes?
 22 Q. Yeah.
 23 A. I believe most of them were. The plats were
 24 subsequently compiled from the notes.
 25 Q. Okay.

1 11th and January 15th. You understand how he was doing
 2 it?
 3 A. Yes.
 4 Q. Two-pole chain and a compass?
 5 A. Right.
 6 Q. Do you think it is possible he could do 92
 7 miles in four days?
 8 A. They also had assistants. I don't know
 9 whether he did or not. I would also just offer that
 10 most of the other surveys that I've seen throughout the
 11 west have similar short periods of time for the surveys
 12 that they did.
 13 Q. We understand that.
 14 So my question to you is, do you think that he
 15 could have done that? He's there with an assistant.
 16 Obviously you can't do it without two guys to hold each
 17 end.
 18 A. Usually it was three.
 19 Q. But you've got to have that, all right?
 20 A. Right.
 21 Q. Do you think they can cover 92 miles in four
 22 days?
 23 A. The other thing -- I don't know whether they
 24 could or not, but that also could have been a
 25 typographical error or transcription error in his field

1 Now, let's go to page 31 of your report.
 2 And this references back to our discussion
 3 where we had started to say -- talk about fraudulent
 4 surveys and whether they were really done or not done
 5 and you had testified, I believe, that you didn't do
 6 anything to check that out?
 7 A. That's correct.
 8 Q. Okay.
 9 Well, now, let me call your attention to the
 10 R.C. Powers survey that you refer to on page 31.
 11 A. You are talking about under 1883 Interior
 12 Survey, the middle of the page there?
 13 Q. Uh-huh, right.
 14 A. Yes, R.C. powers.
 15 Q. "R.C. Powers undertook...", do you see that?
 16 A. Uh-huh.
 17 Q. From what I'm advised, he surveyed 92 miles of
 18 interior section line in four days. If it is any
 19 comfort to you, I'll tell you that I've had a surveyor
 20 tell me that.
 21 A. Okay, you are talking about all of the
 22 interior section lines?
 23 Q. Yeah, that's what he's hired to do.
 24 A. Right.
 25 Q. That's what he says he did between January

1 notes.
 2 Q. So -- is it -- I could run through several of
 3 these with you, but am I going to get the same answer to
 4 all of them that you don't have any opinion, and that's
 5 because you don't know how fast they could move or not?
 6 A. Right.
 7 Q. Okay.
 8 And we would need a surveyor to tell us
 9 whether that was possible; right?
 10 A. Right.
 11 Q. You didn't consult a surveyor to find out
 12 whether somebody could do 92 miles in four days with the
 13 kind of equipment they were using in 1912?
 14 A. No, I did not.
 15 Q. Referring you to page 21 of your report.
 16 A. 21?
 17 Q. Yeah.
 18 A. Okay.
 19 Q. First full paragraph, you talk there about
 20 under the statute, "well-defined natural arteries of
 21 internal communication were to be meandered on one bank
 22 only."
 23 Do you see that?
 24 A. Uh-huh.
 25 Q. Do you know what statute they are referring

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1 to?

2 A. They are again referring to the --

3 Q. The one I showed you earlier?

4 A. Yes.

5 Q. Okay.

6 Are you aware of any rivers that are less than

7 three chains wide that have been declared navigable?

8 A. No, I'm not aware whether they are or not.

9 Q. Do you do any research to determine whether

10 there was any?

11 A. No.

12 Q. Okay.

13 MR. HELM: Off the record.

14 (Discussion off the record.)

15 BY MR. HELM:

16 Q. Three chains is 66 feet; right?

17 A. I'll take your word for it.

18 MR. HELM: We're talking to several engineers.

19 THE WITNESS: I was trying to skim through

20 here. I think it is in my report. I haven't been able

21 to locate it.

22 MR. HELM: Off the record.

23 (Lunch recess ensued from 11:47 a.m. to 1:08

24 p.m.)

25 MR. HELM: Back on the record.

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1 navigable?

2 A. I'm not aware of them. I'm not saying they

3 don't exist, I'm just not aware of them.

4 Q. Now, let me refer you to page 27 --

5 A. Of my report?

6 Q. Yeah.

7 And maybe I just -- let me diverge for a

8 minute, since you just finished reading Defenders;

9 correct?

10 A. Yes.

11 Q. Is it fair to say that the report that you

12 wrote doesn't meet the standards or the tests indicated

13 in the Defenders case for navigability?

14 A. As I indicated earlier, my report isn't an

15 attempt to be a legal opinion, it is a historical

16 analysis, and from the point of view as an expert

17 historian, I'm offering my opinion as to whether the

18 river was navigable or not. I'm not offering a legal

19 opinion.

20 Q. But based on the standards that are set out in

21 that case --

22 A. Uh-huh.

23 Q. -- for example, the idea that the kind of

24 boat that you determine to use is not tied to the date

25 of statehood conflicts with the conclusions of your

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1 BY MR. HELM:

2 Q. We were talking about chains when we left

3 here?

4 A. Right.

5 Q. We have ascertained, it is 22 yards or 66

6 feet.

7 MR. BARKER: Is a chain?

8 MR. HELM: Sixty-six feet.

9 THE WITNESS: Sixty-six yards for three

10 chains.

11 MR. HELM: Sixty-six yards for three chains.

12 MR. BARKER: Right.

13 MR. HELM: Right.

14 BY MR. HELM:

15 Q. And I think the question was --

16 MR. BARKER: How wide is three chains.

17 BY MR. HELM:

18 Q. I think we've established that. We're all

19 reasonably in agreement of that.

20 What we were leading up to, are you aware of

21 any rivers in the United States that is less than 66

22 yards wide that are navigable?

23 A. No.

24 Q. Are you aware of any portions of navigable

25 rivers that are less than 66 yards wide that are

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1 report that it was; right?

2 A. Yes.

3 Q. And so what I'm driving at is your report is

4 not designed to comply with the standards that are set

5 out in the Defenders case?

6 A. It is not designed to apply to any particular

7 legal standard. It is designed to offer an historic

8 opinion regarding navigability.

9 Q. But that historical opinion is not based on

10 any standard?

11 A. It is based on my opinion of what consisted of

12 navigability based on the observations of a lot of

13 contemporaneous observers.

14 Q. But the observations of the contemporaneous

15 observers that you are basing it on don't come with an

16 explanation of the standard that they were using, do

17 they?

18 A. No.

19 Q. And you don't know what that standard would

20 be, do you?

21 A. Not unless they said so explicitly.

22 Q. So if some of your contemporaneous observers

23 thought that a river that was ten feet deep and three

24 chains wide wasn't navigable, that might be a navigable

25 river under Defenders?

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1 A. It could be.
2 Q. Because canoes could use it, couldn't they?
3 A. It could be.
4 Q. Canoes under Defenders might be a customary
5 mode of travel used on the water; right?
6 A. I think you are still asking me to offer a
7 legal opinion, and I've tried to explain what I think my
8 report attempts to do, and it is not to address any
9 particular legal standard.
10 Q. I'm not trying to get you to render a legal
11 opinion.
12 I'm trying to ask you, I guess, as straight as
13 I can ask you, under the standards enunciated in the
14 Defenders case, is it your opinion that your report
15 would still establish that the river was not navigable?
16 A. I still think it calls for a legal conclusion.
17 I've tried to explain what I think my report does, and
18 it offers an opinion about navigability from a
19 historian's perspective.
20 Q. Based on certain judgmental standards that you
21 impose; correct?
22 A. Based on my analysis of what many
23 contemporaneous observers opined.
24 Q. Where did you get the impression that you
25 could only use boats that existed in 1912? That's not

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1 field notes and plats that they did not
2 consider the Gila River to be navigable."
3 Now, they didn't specifically say that, did
4 they?
5 A. No, they did not.
6 They indicated from the way they described it,
7 they indicated that they didn't think it was navigable.
8 Q. That's your interpretation of either their
9 field notes or the actual maps that they prepared?
10 A. That's correct.
11 That's my interpretation as a historian.
12 Q. In fact, of all of the field notes you went
13 through, is there any of them that specifically say, "I
14 don't think the Gila River is navigable"?
15 A. If there were instances of that, I certainly
16 would have put them in my report. I don't remember
17 whether there were or not.
18 Q. You don't recall anything that comes to mind
19 immediately?
20 A. Not immediately, but I know I would have put
21 it in the report if there was a direct statement.
22 Q. I'm sure you would.
23 A. Well, I did on other documents, as I'm sure
24 you probably have seen.
25 Q. Let me refer you to page 29, bottom of the

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1 an observation of contemporaneous observers, is it?
2 A. No.
3 Q. Where does that come from, then?
4 A. I have always thought, and I could be wrong on
5 this, but I've always thought the test was commerce, the
6 way commerce was carried on at the time of statehood.
7 That's the reason why I have the section in my report
8 that discusses the types of watercraft in use at the
9 time of statehood.
10 Q. Defenders would disagree with you.
11 A. Apparently.
12 Q. It says you don't do that, doesn't it?
13 A. It says that.
14 Q. So to the extent -- to that extent your report
15 does not agree with that case?
16 A. That's correct.
17 Q. And your opinion, however, is based on the
18 facts contained in your report?
19 A. Correct.
20 Q. Including the facts about commerce in 1912?
21 A. Correct.
22 Q. Referring you to page 27 at this point, at the
23 last sentence in the first paragraph, it adds the last
24 clause:
25 "... all surveyors indicated in their

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1 page, last sentence:
2 "He made a similar observation about the
3 river on the line between sections 34 and
4 35, but again set no meander corners.
5 Finally on the line between sections 26
6 and 35, he set no meander corners, but
7 offered the description that the stream
8 there had deep water and low banks."
9 Now, what do you take the "deep water" to
10 mean?
11 A. I have no idea. It was a surveyor's opinion.
12 Q. Do you think "deep water" meant deeper than
13 two feet?
14 A. It could be.
15 Q. So, from your depth conclusions, he would have
16 been in the ballpark on depth of water?
17 A. I have no idea what he meant by "deep water."
18 Q. I understand that, but you are assuming it is
19 deeper than two feet?
20 A. I really don't know whether he was meaning two
21 feet or six feet or ten feet or one foot. I just don't
22 know.
23 Q. How does a road become evidence that a river
24 is not navigable?
25 A. It would suggest to me that if there was a

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1 road next to a river, and there are indications by
 2 historical figures that the river was not used to carry
 3 commerce, I think it would be a logical conclusion to
 4 assume that commerce was carried on over land.
 5 Q. Does that mean that the river is not
 6 susceptible to being used for navigation?
 7 A. That would be my conclusion, yes.
 8 Odie Faulk, the historian of the Gila Trail,
 9 makes the same conclusion as well.
 10 Q. Judge Patterson made a different conclusion,
 11 didn't he?
 12 A. Yes.
 13 Q. Referring you to page 34, first line of the
 14 first full paragraph, you say that surveys were done
 15 under the instructions contained in the 1964 -- or the
 16 1864 survey manual. Do you see that?
 17 A. No, I've not totally found it.
 18 You are on page 34?
 19 Q. 33, I'm sorry.
 20 A. Okay.
 21 Yes, I see it.
 22 Q. How do you know that? Does it say anywhere
 23 that that's the case?
 24 A. I'm making that assumption from the dates
 25 under which the surveys were done.

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1 Q. How do you know this?
 2 A. My -- I don't recollect directly.
 3 My guess is I looked at the survey plat and
 4 saw that there were several channels or maybe the field
 5 notes talked about crossing more than one channel.
 6 Q. What's the inconsistency that you're referring
 7 to in Foreman's treatment of the Gila River?
 8 A. Starting in the first full paragraph, line 11,
 9 I write "for example, in part of township 4 south...".
 10 Q. Okay.
 11 A. "For example, in part of township
 12 4 south, range 4 east, Foreman
 13 set meander corners on the outermost
 14 banks of the Gila which flowed in
 15 several channels in this township.
 16 Nevertheless, he set no meander corners
 17 in the sections through which the stream
 18 flowed in the southern part of the
 19 township."
 20 The inconsistency is that he set some meander
 21 corners in part of the township and no meander corners
 22 in another part of the township.
 23 Q. What does that lead us to conclude? He was
 24 lazy?
 25 A. I don't know what -- I don't know why he did

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1 Q. Okay.
 2 Where were these manuals written?
 3 A. I assume they were written in Washington D.C.
 4 and forwarded to the field.
 5 Q. Did we have rapid transfers of goods,
 6 documents, manuals, what have you, in the 1860s from
 7 Washington to the hinterlands of Arizona?
 8 A. If the point you are making is the manual may
 9 not have been there in time, I think I've addressed that
 10 at least in relation to one of the surveyors here where
 11 I indicate there was some degree of uncertainty from my
 12 historical understanding as to whether he had received
 13 the new manual or was still working under the old one.
 14 Q. Do any of the surveys that you reviewed
 15 specifically state what manual they were being done
 16 under?
 17 A. No.
 18 Q. So your conclusions regarding what manual was
 19 being used are exactly that, your assumptions?
 20 A. Yes.
 21 Q. On page 33, further on down, you talk in
 22 parentheses, you say, "... which flow in several
 23 channels in this township."
 24 Do you see that?
 25 A. Uh-huh.

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1 that. I think I indicated in the report in the very
 2 next paragraph my attempts to explain what his opinion
 3 was of the river.
 4 Q. Well, does that mean that we should discount
 5 the meander corners he did set?
 6 A. Not necessarily.
 7 Q. Referring you to page 33, in the middle
 8 paragraph it starts "for example," do you see that?
 9 A. Uh-huh.
 10 Q. "In part of township 4 south, range 4 east,
 11 Foreman set..." blah, blah, blah.
 12 Do you see that?
 13 A. Yes.
 14 Q. Are you aware that township 4 south, range 4
 15 east is upstream of the confluence of the Salt and the
 16 Gila?
 17 A. No, I'm not aware of that.
 18 Q. Would you have used that example if you had
 19 known that?
 20 A. Probably not.
 21 (Witness reviews document.)
 22 I think I could probably correct that for you
 23 right now.
 24 That's a typographical error, I believe.
 25 The heading that it is under indicates that it

1 is the Interior Survey of Township 4 south, Range 4
2 west, and I evidently changed it to 4 east in my report.
3 I don't even know if 4 south, 4 east is on the Gila or
4 not.

5 Q. In the middle of the paragraph of the first
6 not-full paragraph -- there isn't any full paragraph on
7 page 35 -- you state:

8 "... Foreman explained in the meander
9 section of the field notes for this
10 township that the reason for selecting
11 the left bank for meanders is that all
12 the lands of value are on the left
13 bank."

14 A. Yes.

15 Q. How does that explain the misuse of meander
16 lines?

17 A. I have no idea why Foreman did that.

18 Q. That doesn't mean we should necessarily
19 disregard his meander lines vis- -vis navigable, does
20 it?

21 A. There is a one-bank meander line. There are
22 no instructions in any of the manuals instructing
23 surveyors to meander only one bank of navigable rivers.
24 This was an instruction specifically reference to
25 non-navigable rivers.

1 Q. Let me show you what's been identified as
2 Exhibit 96.

3 And what I'm interested in is, do you
4 recognize what that is?

5 A. Yes, this is a survey plat of Township 8
6 south, Range 22 west.

7 Q. Of the Gila River; right?

8 A. Yes.

9 Q. And it is kind of funny looking in the since
10 it has a lot of straight lines on the river portion,
11 doesn't it?

12 A. That's correct.

13 Q. What do those straight lines indicate?

14 A. The right-hand margin of the plat indicates
15 that those are degree bearings for the meandering of the
16 river.

17 Q. Okay.

18 So when you look at one of the these maps and
19 you see a bunch of straight lines, what does that tell
20 you?

21 A. It usually would mean those are meanders on
22 both sides of the river or if it is on one side, on one
23 side of the river.

24 Q. For the most part, those indicate there are
25 some two-sides and one side; right? On the Gila?

1 Q. Well, non-navigable rivers in the opinion of
2 the surveyor; right?

3 A. Right.

4 Q. And his reference points, we don't know what
5 they are?

6 A. Right.

7 Q. But meander lines do tell us something about
8 the physical characteristics of the river that is being
9 meandered, even if only on one side, doesn't it?

10 A. It tells you the sinuosity of the river.

11 Q. It tells you it is an important internal line
12 of communication, whatever that means?

13 A. Correct.

14 Q. It may tell you its -- I forget some of the
15 other ones, it's a uniform river; it has some other
16 physical indications to it?

17 A. That's correct.

18 Q. Okay.

19 And the fact that he made this comment about
20 lands on the left being valueless doesn't affect our
21 conclusions as to his meander lines in terms of their
22 use for defining physical characteristics?

23 A. No.

24 (Exhibit 7 was marked for identification and
25 subsequently remarked as Exhibit 96.)

1 A. Correct.

2 Q. Now, if you look up there in the corner, you'd
3 see some straight lines too, wouldn't you?

4 A. In the left corner?

5 Q. That other strange river up there.

6 A. In the -- yes.

7 Q. So that river was being treated the same as
8 the Gila, wasn't it?

9 A. They were both meandered on both banks; that
10 is correct.

11 Q. On both banks or one bank?

12 A. From this map, I can't tell if the Colorado is
13 being meandered on the right bank as you go down the
14 stream. It would appear it was meandered on left bank,
15 but I can't tell from the right bank and the copy of the
16 meander data in the right-hand margin is pretty much
17 illegible in terms of whether it's -- I can't tell if it
18 is Colorado's notes or not.

19 Q. If it was only meandered on that one bank,
20 what would be the significance of that in terms of
21 navigability?

22 A. I don't know. It also is probably complicated
23 by the fact that the Colorado River forms the border
24 between California and Arizona.

25 Q. Is there some rule that says -- you ought to

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1 know this one -- that when rivers form borders between
2 one state and another, you only meander one side of the
3 river?
4 A. I don't know.
5 It's possible, for example, that if this is in
6 fact California on the other side, that the meander data
7 for that side might be in the California surveys. I
8 just don't know.
9 Q. You do agree that straight lines on these
10 kinds of maps indicate meander sides of a bank?
11 A. Yes.
12 Q. And if that is a straight line meander only on
13 one side, and it turns out that it is not meandered on
14 the other side, on the Colorado section, then we have a
15 navigable river with only a meander line on one side of
16 it; is that fair?
17 A. Yes, but I would be willing to guess that the
18 meander data for the Colorado River are going to be
19 found on the California surveys.
20 Q. Fair guess. We can check that.
21 Referring you to page 37, bottom of the first
22 full paragraph, you say:
23 "The presence of the old bank suggested
24 that the stream had recently changed
25 channel, suggesting its unreliability for

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1 report on what was said on both pro-navigability as well
2 as counter-navigability, and when I considered the
3 entire overall picture that was presented, while there
4 were indications by some parties that in places and at
5 some times of year there may have been considerable
6 quantities of water in the Gila, the overall picture
7 that was painted to me was that the Gila River in my
8 opinion, and not a legal opinion, was not navigable.
9 Q. Does that opinion require it to be navigable
10 all year long?
11 A. No.
12 Q. So if we had an abundance of water in the Gila
13 River, for three months, that -- would that be a
14 sufficient amount of water for you, using your
15 standards, to determine that it was commercially
16 navigable?
17 A. As I indicated in the section where I discuss
18 the governmental reports, there are quite a few of those
19 governmental reports that do indicate that there were
20 reaches of the river that at certain times of year,
21 either at the same time of year or at differing times of
22 year, did contain substantial quantities of water, and
23 in other parts of the river, that water sank into the
24 underflow of the river.
25 Again, I thought I ought to present as

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1 commercial transport."
2 You aren't making a general statement, are
3 you, that just because streams change channels, they're
4 not reliable for commercial transport?
5 A. No, this is just one of many possibilities.
6 Q. So this is just more speculation on your
7 behalf?
8 A. It's more -- it's -- I'm indicating that it is
9 one possibility.
10 Q. Referring you to page 38, the middle of the
11 page, right above the footnote 36, you say:
12 "... the Gila River flowing through the
13 center of the township contains an
14 abundance of water..."
15 Do you see that?
16 A. Yes, that's part of a quotation.
17 Q. In a number of places in this report, you
18 quote anecdotal or other information that seems to
19 indicate that there's lots of water in the Gila River.
20 A. In places. In places.
21 Q. And you look at that for the most part as not
22 being an indicia that it was navigable?
23 A. I'm trying to, when I present this
24 information, to present as an objective view of the
25 river as possible, and I felt it was my obligation to

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1 objective a view of what contemporaneous observers
2 thought about the river, and when I considered it as a
3 whole, that was my opinion, that the river was not
4 commercially navigable.
5 Q. But you are considering it as a whole, aren't
6 you?
7 A. Yes.
8 Q. So if we had 40 miles of river with an
9 abundance of water in it that didn't sink into the
10 ground, but we have another 40 where it sinks into the
11 ground, because you are considering it as a whole, that
12 makes the 40 that had a lot of water and could have been
13 navigated, non-navigable under your assessment?
14 A. I don't think any of the documents that I
15 looked at said that there were stretches of 40 miles
16 where there was a lot of water in the river
17 consistently.
18 Q. Do you agree with my interpretation of what
19 you're saying, though?
20 In other words, what you did was you said, I'm
21 going to look at this river as a whole, and if part of
22 it is not suitable for navigation, and some part of it
23 might have been, that part is destroyed by the
24 non-navigable part?
25 A. I looked -- correct.

1 I looked at the whole of the river, but I
2 think your example of a 40-mile reach, there are no
3 documents that go anywhere near that length of the river
4 talking about ample quantities of water.

5 Q. I don't -- that's just an example.

6 A. Okay.

7 Q. You didn't make any determination about
8 lengths of the river that had ample quantities of water,
9 did you?

10 A. No.

11 Q. We talked about a steamboat going up the Gila
12 River for some distance for seven years.

13 A. Correct.

14 Q. That's a specific reference out of your
15 report?

16 A. Right.

17 Q. One would conclude for that steamboat to get
18 up that river, there must have been ample quantities of
19 water for the steamboat to steam?

20 A. Correct.

21 Q. All right.

22 And that might indicate that even though other
23 parts of the river weren't navigable, that part was;
24 right?

25 A. It would be one factor that I would consider.

1 how big the stretch of the river was where those large
2 amounts of water were present?

3 A. That's correct.

4 Q. Would it be fair to say that you made no
5 particular assessments of those areas to determine
6 whether they were, in fact, a navigable reach of the
7 river?

8 A. I don't understand your question.

9 Q. We've got, as in the case of page 38, an
10 indication that there is a large abundance of water at a
11 portion of the Gila River.

12 You didn't go, then, say, I'm going to set
13 this portion aside, and I'm going to do a more
14 particularized review of this portion to make a
15 determination whether there is a reach of that river in
16 the area where they say there is an abundance of water,
17 to determine whether that portion of the Gila River
18 could be navigable?

19 A. No.

20 Q. No, you didn't make any of those kinds of
21 determinations?

22 A. That's right.

23 Q. This may be a specific question, but are you
24 aware of any river that is at least 110 yards wide and
25 deeper than a man could walk across, that is not

1 Q. Okay.

2 But because you factored that into the
3 non-navigability of the whole river, that
4 non-navigability of the whole river overrode the
5 navigability of a portion in your conclusion?

6 A. No, that's not correct.

7 I also considered other documents and other
8 evidence with regard to that seven-mile reach of the
9 river.

10 In other words, I did not base my judgment on
11 whether that part of the river was not navigable or
12 navigable solely on the steamboat.

13 I looked at surveyor notes. I looked at
14 homestead patents. I looked at newspaper reports. I
15 looked at a variety of other documents. And
16 cumulatively, once I looked at the overall picture for
17 that reach of the river, as well as for the entire
18 river, my conclusion was that it was not
19 commercially navigable.

20 Q. Would it be your testimony that in all of the
21 various indicia that you looked at, where there was
22 indications of substantial water, whether we've used the
23 terminology "abundance" or another word -- some guy uses
24 10 feet -- but there are lots of references to large
25 quantities of water, you didn't do anything to determine

1 navigable in the United States?

2 A. I'm not aware or unaware. I just don't know
3 the answer to the question.

4 Q. Could you point out to me on page 39 the
5 specific statements that Martineau made that you are
6 referring to where he says, notwithstanding me setting
7 meander corners on both sides of the river, it's not
8 navigable?

9 It is at the bottom of the page.

10 A. Well, he explained that it was the setting of
11 the meander corners that were consistent with the new
12 January 1890 instructions for non-navigable bodies of
13 water if on average they were more than three chains
14 wide.

15 Q. But doesn't that also tell you the same thing
16 for navigable waters or non-navigable?

17 A. I would have to look at the field notes.

18 Q. Does Martineau phrase it the way you say it?

19 A. You have those notes in your copy of footnote
20 38.

21 Q. There you go.

22 A. (Witness reviews document.)

23 I can't find it in here right now. It's in
24 the notes somewhere. I don't know whether it is in this
25 particular part of it or if it is in the field notes in

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1 the general description of the township which is not on
2 this particular document.
3 Q. What copy of what document would it be?
4 A. It would be in this document.
5 You don't have the complete set of it, just
6 the pages that I cited in my footnote, and I may have
7 taken the explanation from the general description of
8 the township which is the last page of the -- usually
9 the last page of the field notes.
10 Q. Okay.
11 So are you telling me now that I didn't get
12 all of the documents?
13 A. You got everything that I have in the
14 footnotes.
15 Q. But I'm trying to find out where something is,
16 and you're telling me it might be in something that I
17 don't have.
18 A. It may be in other pages of the footnotes for
19 this particular survey.
20 Q. And did you have those other pages?
21 A. I did, but I sent them all back to Salt River
22 Project.
23 Q. Okay.
24 So based on a document that you gave me, we
25 can't confirm that statement, can you?

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1 Q. Well, if it is not in here, and you've looked,
2 right?
3 A. Quickly, yes.
4 Q. Take your time.
5 A. (Witness reviews document.)
6 I can't find it now.
7 I know there was a reason I put that in there.
8 I'm not sure where the information is from.
9 Q. Doctor, it is not in his field notes, is it?
10 A. Apparently not.
11 Q. You said it was.
12 A. I don't --
13 Q. You're wrong.
14 A. I guess I made a mistake.
15 Q. Do you know where you found that information?
16 A. No, I don't, not right now.
17 Q. Do you suspect it is in the boxes that you
18 sent to SRP?
19 A. It could be, I don't know.
20 Q. If you can't find the backup to that
21 statement, what does that do to your conclusion that
22 Martineau considered the river to be non-navigable,
23 albeit he meandered both banks?
24 A. I wouldn't have put the statement in if it
25 didn't exist in some historical document.

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1 A. No.
2 Q. And the document is Gila 38-L for the record.
3 Doctor, is this the stuff -- this is document
4 39 that you gave us, and it would appear to be -- give
5 me back 38. It would appear to be what immediately
6 follows 38.
7 A. Yes.
8 Q. So, is that where you ought to be able to find
9 it? That's the end of Martineau's work; right?
10 A. (Witness reviews document.)
11 It's not in there either. I wouldn't have put
12 it in if it is not there somewhere. I don't know where
13 it is.
14 Q. You just can't find it now, huh?
15 A. That's right.
16 Q. And the documents that might disclose where it
17 would be are now in the possession of the Salt River
18 Project; right?
19 A. I would assume it is in the field notes and if
20 that's the complete set of field notes for Martineau,
21 then it is probably in there somewhere.
22 Q. This is what you gave me. That's all I know.
23 A. I don't know whether it is a complete set of
24 the field notes or not. It is the stuff cited in my
25 footnotes, but that's --

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1 Q. Answer my question.
2 If you can't find the backup to that, what
3 does that do to your conclusion?
4 A. It makes it less certain.
5 Q. So then it's just trust me, I must have seen
6 it somewhere?
7 A. That's what I'm telling you right now.
8 Q. You go on to say on page 40:
9 "Confirming the lack of navigability of
10 the Gila, Martineau also noted the
11 presence of the road from Yuma to Gila
12 City and the Southern Pacific Railroad,
13 both of which paralleled the stream?"
14 A. That's correct.
15 Q. Martineau doesn't say anywhere in his notes
16 that those led him to a conclusion that the Gila River
17 was not navigable, does he?
18 A. That's my conclusion.
19 Q. That's your conclusion?
20 A. That's right.
21 Q. But you didn't tell anybody that was your
22 conclusion, did you?
23 A. The confirming the lack of navigability of the
24 Gila, that's my statement, and then I'm going on to
25 point out what Martineau --

1 Q. Martineau also noted?
 2 A. Right, he also noted these things, but the
 3 portion of the sentence that reads "Confirming the lack
 4 of navigability of the Gila...", that's my opinion.
 5 Q. You didn't tell anybody that was your opinion?
 6 A. Well, I'm sorry I didn't write that clearly
 7 enough.
 8 Q. That opinion that you hold about roads and
 9 railroads confirming non-navigability is not in
 10 accordance with the Defenders opinion, is it?
 11 A. The Defenders opinion?
 12 Q. The case that you just read.
 13 A. No, it's not.
 14 Q. At the bottom of page 40, going over to page
 15 41 you state:
 16 "Moreover, meander lines were apparent on
 17 the plat itself. In addition,
 18 immediately below the plat was the
 19 notation that the water surface area
 20 amounted to 368.58 acres."
 21 What does that tell us about navigability?
 22 A. That there were meander lines done on both
 23 sides of the river and there was a certain amount of
 24 acreage encompassed within those meander lines.
 25 Q. That doesn't tell us anything about whether it

1 I just don't know where that information is located
 2 right now.
 3 Q. We should be able to find it in this stuff
 4 that you've given us?
 5 A. I don't know. I know there is a reason I put
 6 it in there. I don't know where it is right now.
 7 Q. I understand, but understand my problem.
 8 A. Yes, I do.
 9 Q. I've got to find this stuff.
 10 A. Uh-huh.
 11 Q. And your erstwhile friend next to you has told
 12 me I've got everything I need, and now I can't find
 13 things and you can't find things.
 14 MR. BARKER: That's not what your erstwhile
 15 friend said. Your erstwhile friend said you have
 16 everything we have.
 17 BY MR. HELM:
 18 Q. Could the difference between White and
 19 Martineau simply be in the eyes of the beholder?
 20 A. Certainly.
 21 Q. And the problem that we have earlier since
 22 there wasn't any standard on what's navigable and not
 23 navigable, Martineau could be convinced the river was
 24 navigable under his standard?
 25 A. He could have been convinced of that.

1 is navigable or not, does it?
 2 A. No.
 3 Q. You go on to state on that same page:
 4 "The field notes of the 1874 survey of
 5 the next township downstream, Township 8
 6 south, Range 22 west, corroborate that
 7 Martineau's meanders of the Gila had been
 8 done because the stream was non-navigable
 9 and over three chains wide."
 10 How do they make such corroboration?
 11 A. I explain it in the next paragraph that he
 12 meandered the Gila River under the terms of the 1864
 13 manual that called for meandering of only one bank of
 14 non-navigable streams, and that's what he did.
 15 Q. But Martineau didn't use the 1860 manual, did
 16 he?
 17 A. No, he used the newer manual.
 18 Q. So because White only meandered one bank and
 19 Martineau meandered two banks, you're assuming that it
 20 had to be the three-chain standard because the
 21 three-chain standard wasn't in existence in 19 -- or in
 22 1864?
 23 A. Yes.
 24 And as I indicated, I'm certain I put in the
 25 statement about relying on the 1890 manual for a reason,

1 Q. And White could have been convinced it wasn't?
 2 A. That's correct.
 3 Q. And they both could be right under government
 4 standards; right?
 5 A. And they both could be wrong.
 6 Q. True.
 7 Referring you now to the bottom of page 42,
 8 top of page 43 of your report:
 9 "The survey field notes and plats of the
 10 sample areas discussed above clearly
 11 indicate that multiple surveyors --
 12 undertaking their surveys in different
 13 years and at disparate times of year --
 14 all reached the same conclusion that the
 15 Gila River was not navigable."
 16 None of those field notes specifically say
 17 that, do they?
 18 A. No, they all are consistent with the
 19 instructions of how to handle non-navigable bodies of
 20 water.
 21 Q. And some of those field notes indicate that
 22 they meandered both sides of the river?
 23 A. That's correct.
 24 Q. Which is consistent with a navigable river?
 25 A. Except that I believe I explained that there

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1 is a reason why I put the statement in there, that
2 Martineau explained that he was doing it under the
3 instructions for bodies of water three -- what is it? --
4 three chains and wider.
5 Q. We just can't find that statement at this
6 point?
7 A. That's right.
8 Q. What you reviewed is not all of the Gila
9 River, is it?
10 A. In terms of what?
11 Q. Of surveying?
12 A. I reviewed the entire river.
13 Q. Of the stuff we got, it is not the whole
14 thing?
15 A. No, all you have is what's in my footnotes.
16 Q. Right.
17 And there are lots of other portions of the
18 Gila River that are meandered, aren't there?
19 A. Yes, there are.
20 Q. And those meanders, do they indicate
21 navigability?
22 A. None of them do.
23 Q. Okay.
24 And for the same reasons that you've espoused
25 here?

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1 A. That's correct.
2 Q. So the consistency is that it was
3 inconsistent?
4 A. The consistency is no one meandered the river
5 for reasons of navigability. All of the meanders done
6 of the river were consistent for instructions of how to
7 deal with non-navigable bodies of water under various
8 circumstances. There was never an instance of
9 meandering the river that I'm aware of where they
10 meandered both banks for reasons that suggested clearly
11 navigability.
12 Q. Doctor, you could have before 1890 --
13 A. Uh-huh.
14 Q. -- any survey done before 1890, meandered on
15 both sides, and that would be consistent with
16 navigability, wouldn't it?
17 A. I believe so, yes.
18 Q. So how did you explain those surveys away?
19 A. There weren't any as far as I know. They were
20 three chains or less where they were meandered on both
21 banks.
22 Q. But that wasn't a requirement before 1891, was
23 it?
24 A. I looked at every single set of field notes.
25 There were no field notes on the entire Gila River

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1 A. Yes.
2 Q. Okay.
3 And if we go through every set of field notes
4 that are out there, are we going to find statements that
5 say, "I'm meandering both sides because it is three
6 chains wide"?
7 A. I don't remember.
8 Q. How did you come to the conclusion that all of
9 the other areas that were meandered were not navigable?
10 A. Because the treatment by the surveyors was
11 consistent with whatever instructions they were provided
12 for dealing with navigable or non-navigable pods of
13 water. It was consistent with an opinion that the river
14 was not navigable.
15 Q. They weren't given any instructions. We've
16 already decided that. They told them determination of
17 whether it was navigable was in their own eyes. How can
18 Martineau's eyes be the same eyes that White's got?
19 A. They wouldn't necessarily be.
20 They were told to meander what was navigable,
21 quote, under the statute, unquote.
22 Q. And we know that the statute doesn't define
23 what navigability was, don't we?
24 A. That's correct.
25 Q. So it is in the eyes of the beholder; correct?

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1 between the Salt and Colorado River where the field
2 notes indicated on the basis of meanders that the river
3 was navigable.
4 Q. I want to get this perfectly clear.
5 What you're telling me is that there were no
6 surveys done prior to the 1891 instructions when the
7 three chains came into being, that meandered both banks
8 of the Colorado River?
9 A. To the best of my knowledge.
10 MR. BARKER: Objection to the form of the
11 question.
12 We're not talking about the Colorado River.
13 MR. HELM: You're right.
14 The Gila River.
15 THE WITNESS: To the best of my knowledge,
16 that's correct.
17 BY MR. HELM:
18 Q. If there were you didn't discover them or deal
19 with them?
20 A. If there were, I would have put them in the
21 report and then addressed it in some way or other. I
22 would have said this is what they did, I don't know why
23 they did it this way, but this was their opinion. But
24 if there are others out there, then I haven't seen them.
25 Q. At this point, Martineau's survey qualifies as

1 one of those, doesn't it?
 2 A. It may, except to the extent that I have that
 3 statement in there that he did it under the instruction
 4 of the 1891 manual.
 5 Q. If you can't prove that up, then we've got the
 6 exact situation I'm talking about, don't we?
 7 A. I suppose so.
 8 Q. I'll refer you to page 46, because I'm trying
 9 to get your chapter and verse on this.
 10 Start of the second paragraph:
 11 "Federal government surveyors were
 12 specifically charged with the task of
 13 identifying navigable streams as part of
 14 their surveying duties, and the manuals
 15 and instructions under which they carried
 16 out their work were very precise about
 17 how navigable bodies of water were to be
 18 distinguished from non-navigable ones."
 19 All right?
 20 A. Uh-huh.
 21 Q. We've got all of the manuals right here.
 22 A. Uh-huh.
 23 Q. Can you show me where that precise language
 24 is?
 25 A. The sentence is probably poorly phrased.

1 What I meant was they were very precise about
 2 what the surveyors were to do, if in their opinion the
 3 rivers were navigable.
 4 Q. And they were very imprecise about how you
 5 determine what a navigable river was, weren't they?
 6 A. That's correct.
 7 Q. On the bottom of page 57, you state:
 8 "However, the patents which appear on
 9 these exhibits are representative of
 10 settlement patterns throughout the
 11 basin."
 12 How did you determine the representativeness
 13 of the settlement pattern?
 14 A. I obtained all of the patents that either
 15 touched or were near to the historically mapped channels
 16 of the Gila River, and I also obtained all of the patent
 17 files, and since it would have been essentially
 18 impossible to do a manageable discussion of every single
 19 patent down the river, I selected ones where there were
 20 heavier settlement so there would be more patents to
 21 discuss.
 22 Q. Okay.
 23 On page 59 and 60, you talk about, once again,
 24 federal officials would have removed the lands if they
 25 thought it was navigable.

1 Do you see that?
 2 A. Uh-huh.
 3 Q. Now, this whole discussion presupposes they
 4 know it was navigable; right?
 5 A. Yes.
 6 Q. Are you aware that there have been bodies of
 7 water, streams, what have you, that have been determined
 8 navigable after statehood?
 9 A. If there are, I'll take your word for it.
 10 Q. Well, are you aware of Great Salt Lake?
 11 A. Yes.
 12 Q. Are you aware of the Utah case?
 13 A. No.
 14 Q. To the extent that there have been bodies of
 15 water determined to be navigable after statehood, these
 16 statements about what federal officials would have done
 17 are not operative, are they?
 18 A. It's cumulative. It is many officials all
 19 saying the same thing, that not one case did any parcel
 20 that was granted overlying the Gila River have lands
 21 removed from it on the grounds that that part of the
 22 river was navigable.
 23 Q. Okay, because those officials thought it was
 24 non-navigable; right? That's your conclusion?
 25 A. That's right.

1 Q. You wouldn't expect them to have removed it
 2 under those circumstances; right?
 3 A. If they thought it was non-navigable, right.
 4 Q. The point I'm making, if it is subsequently
 5 determined to be navigable after statehood, there
 6 would -- there would have been no reason for those
 7 officials to have removed it, would there?
 8 A. That's right.
 9 Q. Because they wouldn't have known to?
 10 A. That's right.
 11 Q. All right.
 12 So the conclusions that you have in this part
 13 of your report presuppose a knowledge of navigability,
 14 don't they?
 15 A. Yes.
 16 Q. If federal officials didn't think it was
 17 navigable, then you can't possibly have expected to find
 18 a patent that had a reservation in it, could you?
 19 A. That's correct.
 20 That's the whole point of the section that's
 21 written.
 22 Q. I understand.
 23 And if they are wrong --
 24 A. Then it is a whole lot of people that were
 25 wrong.

1 Q. There have been rivers declared non-navigable
 2 after statehood, haven't there?
 3 A. Non-navigable?
 4 Q. Navigable, I'm sorry. In lots of the states
 5 of the United States.
 6 A. Yes, from what I understand.
 7 Q. You are aware of one in Alaska, aren't you?
 8 A. Yes.
 9 Q. Do you think maybe there will be some patents
 10 up on those lands that don't have reservations on it?
 11 A. Could be.
 12 Q. Because it wasn't done until 1970 or whenever
 13 it was?
 14 A. There could be.
 15 Q. All of your discussions of no land reserved,
 16 no land reserved and no land reserved, all have that
 17 presupposition, don't they?
 18 A. Yes.
 19 Q. Page 64, you start talking about land disputes
 20 in 1931?
 21 What significance is a land dispute over water
 22 in 1931 have to do with a navigability determination in
 23 1912?
 24 A. Simply that the parcel of land involved
 25 included the bed of the Gila River and that the same

1 whatever early time you want to use, any different than
 2 the floods that occurred on the Mississippi river in its
 3 unregulated state in 1800?
 4 A. I don't know the answer to that question.
 5 Q. Do you perceive a difference?
 6 A. My understanding is that the floods in Arizona
 7 in general, tend to be more seasonal and precipitous due
 8 to thunderstorms, whereas flooding in the Mississippi
 9 river area in the Midwest is -- can be brought about for
 10 other reasons.
 11 Q. Isn't the Mississippi flooding fairly
 12 seasonal?
 13 A. Yes.
 14 Q. So to the extent that the Mississippi is
 15 seasonal and the Gila is seasonal, we have seasonal
 16 flooding, maybe different seasons, but seasonal
 17 flooding?
 18 A. The Gila is subject to flooding from flash
 19 floods from huge thunderstorms and the like which you
 20 are not going to find on the Mississippi. A large
 21 thunderstorm is not going to cause a flood on the
 22 Mississippi.
 23 Q. Do those floods occur because there is no
 24 water in the Gila, that's why we call it a flash flood?
 25 A. I don't know how to answer your question.

1 assumptions that were being made for patents prior to
 2 1912 were still being made as of 1931.
 3 Q. And maybe even more so, wouldn't you agree?
 4 Because whatever diversions had taken place between 1912
 5 and 1931 had even lessened the amount of water flowing
 6 in the river?
 7 A. Yes.
 8 Q. Are you aware of any lands in Arizona that
 9 might have been reserved under the Equal Footing
 10 Doctrine?
 11 A. I'm not aware or unaware. I don't know. I'm
 12 not aware of any such lands, but that doesn't mean they
 13 don't exist.
 14 Q. Are you aware of any river declared navigable
 15 after statehood where sovereign lands were withheld at
 16 statehood?
 17 A. The same answer as to the last question.
 18 Q. You are not aware of any?
 19 A. No.
 20 Q. You draw some conclusions regarding the
 21 non-navigability of the river based on floods that occur
 22 on the river?
 23 A. That's correct.
 24 Q. How were the floods that occur on the Gila
 25 River in its kind of unregulated state in 1860 or

1 Q. Do you know if we really have those kinds of
 2 flash floods in 1840 when there was all kinds of water
 3 in the Gila River because there hadn't been any
 4 divergence?
 5 A. I don't know whether there was or not. I'm
 6 basing my answer to that on the reports of parties in
 7 the 19th century who visited the area and recorded their
 8 impressions of what the river was like.
 9 Q. What causes a river channel to change?
 10 A. It can be a flood. It can be by a slow
 11 eroding away of the bank of a river.
 12 Q. You talk on page 70 --
 13 A. I'm sorry, what was the page numbers?
 14 Q. Pages 70 and 71 talk about "the vivid
 15 descriptions of a violent and erratic river."
 16 I take it those are references to the flood
 17 descriptions in your report?
 18 A. Correct.
 19 Q. Are, once again, those any more different than
 20 what you would find from a settler on the Missouri river
 21 in 1812 or something?
 22 A. I think they would be. I think the river
 23 would rise much more quickly in response to a
 24 thunderstorm and perhaps fall back much more quickly as
 25 well, once the storm had abated.

1 Q. Desert Land Act, are you aware of any lands
 2 that were patented under that Act where it was
 3 subsequently determined that the water used to patent
 4 the land came from a navigable river?
 5 A. I'm not aware or unaware. I just don't know
 6 the answer.
 7 Q. Page 72 at the top of the page, you talk about
 8 20 patents that were issued.
 9 Were those patents issued after diversions had
 10 already started on the Gila River?
 11 A. No, I would assume they were. I don't know
 12 the specific dates. The patents themselves or at least
 13 some of them are discussed in the sections that follow.
 14 Q. Descriptions of the patents and things that
 15 you keep in here, for example, you talk about Iragstad
 16 on 73 and Hefley and stuff like that, those are all
 17 descriptions about the Gila or the land at the time they
 18 filed that document, weren't they?
 19 A. Yes.
 20 Q. They are not descriptions of how the Gila
 21 would have been if there hadn't been any diversions?
 22 A. That's right.
 23 Q. Or any manmade structures or anything like
 24 that?
 25 A. Right.

1 MR. BARKER: Those of us with one kidney would
 2 like to request a break.
 3 (Discussion off the record.)
 4 (Recess ensued from 2:45 p.m. to 2:54 p.m.)
 5 BY MR. HELM:
 6 Q. Is it safe to say you're not aware of any time
 7 prior to a river's having been declared navigable where
 8 lands were reserved for sovereign rights?
 9 A. I'm not aware or unaware. I just don't know.
 10 Q. You're not a -- to the extent you are aware,
 11 you are not aware?
 12 A. Right.
 13 Q. On page 78, and in several other places in
 14 your report, you refer to "contemporaneous observers."
 15 Fair to say they are not observing the normal
 16 and ordinary or the natural and ordinary flow of the
 17 Gila River unless you found somebody who was there
 18 before 1840?
 19 A. I don't understand your question.
 20 Q. Well, if your contemporaneous observer is
 21 somebody as in the case of James Forest in 1925, a whole
 22 lot of water of the Gila River had already been
 23 diverted; right?
 24 A. That's right.
 25 Q. So, to the extent that that diversion no

1 longer depicts or results in a depiction that's no
 2 longer the natural and ordinary flow of the Gila River,
 3 those observers are not observing the river in its
 4 natural and ordinary condition, as that terminology is
 5 used, when we try to find whether a river is factually
 6 navigable or not?
 7 A. That's correct.
 8 Q. Page 79, you talk about the State's not making
 9 any in-lieu selections of water?
 10 A. Of water?
 11 Q. Not of water, of land, as a result of the loss
 12 of lands in the designated sections because of the
 13 navigability of something; right?
 14 A. Yes.
 15 Q. That's significant only to the extent that it
 16 indicates the state at the time didn't think it owned
 17 any navigable rivers; right?
 18 A. That's correct.
 19 Q. And if it turned out they did, well, oops,
 20 that was just a mistake?
 21 A. That's correct.
 22 Q. And you go on and you talk about state
 23 patents.
 24 A. Yes.
 25 Q. Did you ever find any instance in any of your

1 research or reviewing where the officials of the State
 2 of Arizona in issuing a patent went back and
 3 reconstructed the flow of the river in its natural and
 4 ordinary condition to determine whether it was navigable
 5 before issuing the patent?
 6 A. Are you talking about on the Gila?
 7 Q. Right.
 8 A. No, I never saw that type of information.
 9 Q. And to the best of your knowledge, that was
 10 never done; isn't that right?
 11 A. I never saw it.
 12 Q. How did you treat diversions on the Gila River
 13 that occurred after statehood?
 14 A. What do you mean, how did I treat them?
 15 Q. Well, you talk about patents and things, and
 16 you're up to as far as up 1950s and things like that,
 17 all right?
 18 A. Uh-huh.
 19 Q. Well, that's significantly after the date of
 20 statehood?
 21 A. Correct.
 22 Q. So you would have to make some adjustments to
 23 the eyes of the beholder for the diversions that took
 24 place between statehood and whenever the patent was
 25 issued; right?

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1 A. To do what?

2 Q. To put more water back in the river.

3 A. I just took the statement of the observer at

4 face value and recounted this is what they said. I

5 didn't feel that I needed to try and reconstruct the

6 historical river on behalf of the historical observer.

7 Q. Page 82, you say:

8 "State patents in Section 32, support the

9 conclusion that the Gila River was not

10 considered navigable."

11 How?

12 A. Because the state patented out lands to

13 parties through which part of the river flowed, and at

14 the time those state officials who were patenting out

15 that land evidently did not consider the riverbed to be

16 the state sovereign land.

17 Q. Do you know the first time any state officials

18 ever considered any land or any river, other than the

19 Colorado in the State of Colorado, navigable and when

20 was it?

21 A. My understanding was that was the whole thing

22 that preceded the ANSAC proceedings on the Verde River,

23 which was the '80s or '90s, I'm not sure which, 1980s or

24 1990s.

25 Q. Let me see if -- let me ask you another

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1 A. Right.

2 Q. They want money. They don't need land; right?

3 A. Uh-huh.

4 Q. Explain for me that rationale. How does that

5 work? The state is trying to sell land, but you want it

6 not to sell land.

7 A. Let me put it this way:

8 I never saw any indication in the State Land

9 Department records that I looked at where there was any

10 hesitancy on the part of the state or where any state

11 official would have said, wait a minute, we may not be

12 able to sell this land because it is sovereign land in

13 the bed of the Gila River.

14 Q. Why can't they sell it? Can't you sell

15 sovereign land as long as you get fair market value for

16 it?

17 A. I don't know the answer.

18 Q. Assume you can sell it.

19 MR. BARKER: Objection to the form of the

20 question.

21 Assumes a legal conclusion.

22 BY MR. HELM:

23 Q. I'm only asking for his opinion.

24 Assume you could sell land. Why would they

25 bother to reserve it?

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1 question about that.

2 Why would the state -- the state is trying to

3 sell this land; right? That you're talking about to

4 raise money?

5 A. Uh-huh.

6 Q. Why would they want to reserve land from land

7 they were trying to sell?

8 A. I only have the very foggiest understanding of

9 what precipitated the creation of ANSAC, but my

10 understanding was that it was a dispute with a gravel

11 mining company in -- that was mining gravel and sand in

12 the bed of the Verde River, and the state, for reasons

13 that I don't know, didn't like the way that this was

14 being conducted and wanted to stop it and get the gravel

15 mining company out, so they then asserted that the Verde

16 River was navigable in order to force the mining company

17 out of the bed of the river.

18 Q. That's not my point.

19 You draw conclusions from the fact that on

20 state patents, the state didn't reserve land out from

21 those patents to opine that the river is not navigable;

22 fair?

23 A. Right.

24 Q. The question I have for you, the state is

25 trying to sell land; right?

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1 A. I guess if they could sell it, I guess they

2 wouldn't.

3 Q. I can understand the feds reserving land

4 because they are reserving it for the state; right?

5 But the rationale that you're using in this part of your

6 report is the state reserving lands for itself --

7 A. Uh-huh.

8 Q. -- not for some third party --

9 A. Right.

10 Q. -- when they are trying to sell that land.

11 A. But as I indicated, there was never any

12 suggestion on the part of the state that they might have

13 some problem in selling it because these were sovereign

14 lands as opposed to just simple title lands.

15 Q. But rationally speaking, I don't understand

16 the rationale. I'm not saying there might be a problem

17 or might not be a problem.

18 Assuming that they can sell any land they own,

19 all right, jump through whatever hoops they've got to

20 jump through, you know, publish it, get fair market

21 value, get an appraisal, lots of requirements that

22 states have to get fair market value for it, but

23 assuming they could sell it, your rationale is they

24 wouldn't have sold that land and that that would

25 therefore -- and because they did that, that means it is

1 not navigable, and I don't follow that. It is just land
2 the state owned. I don't understand your reasoning. I
3 want you to explain it to me.

4 A. Well, I may be wrong in this, but I was under
5 the impression at the time that I wrote this that the
6 state might not be able to sell sovereign lands, that
7 these were somehow or other, lands that were held in the
8 public trust, and therefore, they would not have been
9 able to have sold them.

10 Q. If they can sell them, your conclusion would
11 change, then?

12 A. Yes.

13 Q. We were talking about diversions a few minutes
14 ago and adjusting for those diversions to take into
15 account the historical time that your observer was
16 looking at the river; okay?

17 A. Uh-huh.

18 Q. And you testified that you didn't make any
19 such adjustment.

20 Doesn't that make those observations
21 inconsistent?

22 I mean, you've got a guy in 1950 making one
23 observation, and a guy in 1870 making another
24 observation. How do I put those two together?

25 A. You put them together in the overall

1 cumulative picture that all of the observers create.

2 You are correct in that you can't compare the
3 1890 observation with the 1950 observation because they
4 are two different times, probably two different seasons,
5 two different water years, it's just one more element of
6 what's painting a bigger picture of the Gila River.

7 Q. Did you look at any of the USGS or other water
8 maps in making your conclusions?

9 A. The water maps themselves?

10 Q. Yes.

11 A. No, I did not.

12 Q. Never tried to reconstruct the flows?

13 A. No, I looked at a lot of the USGS papers, but
14 not the maps.

15 Q. Do you accept the USGS records establishing
16 the amount of water in the Gila as accurate and
17 authoritative?

18 A. All of them?

19 Q. Uh-huh.

20 A. You mean the water supply papers or?--

21 Q. Water supply papers, the water maps.

22 A. I didn't look at the maps.

23 Q. Do you accept the USGS maps as --

24 A. To the extent that the parties who created
25 them believed they were accurate, I would accept them as

1 accurate, yes.

2 Q. As accurate as any other stuff you've looked
3 at; right?

4 A. Probably more accurate than, say, individual
5 farmers observations.

6 Q. Do you accept the records of the Bureau of
7 Reclamation as being authoritative and accurate also?

8 A. Yes.

9 Q. I apologize, it's been a while.

10 Did you testify that you had a copy of the
11 Gila River Navigability Study when you wrote your
12 report?

13 A. The ANSAC study?

14 Q. Yeah.

15 A. The draft report?

16 Q. That little hummer right there (indicating).

17 A. No, I did not have it when I wrote the report.

18 Q. Okay.

19 A. In fact, I believe that was written after I
20 had presented my report to ANSAC.

21 Q. That's 1994, if you remember.

22 A. Yes, because I believe there are quite a few
23 sentences in that report virtually verbatim taken out of
24 my report.

25 Q. Referring you to page 92 of your report, you

1 talk about Wheeler and you indicate Wheeler's pessimism
2 and you are using this as part of your evidence.

3 We know the Colorado is a navigable river;
4 right?

5 A. Yes.

6 Q. If Wheeler was pessimistic about the Colorado
7 River as a navigable river, why should we pay much
8 attention to him about his thoughts on the Gila? Isn't
9 he just wrong?

10 A. Well, I guess the way I could phrase this is
11 that if he was pessimistic, albeit wrong, about the
12 Colorado, a stream of even lesser flow would be even
13 less likely to be navigable.

14 Q. I guess that's one wrong makes a right?

15 A. Well, two wrongs, one of them a greater degree
16 than the other.

17 Q. Would you agree that a flood doesn't
18 disqualify a river from being navigable?

19 A. Yes.

20 Q. On page 95, there's a reference to the
21 Destructive Floods in the United States report?

22 A. Yes.

23 Q. That report or that study and the descriptions
24 that are contained therein are all with water diversions
25 in place and artificial structures in place; right?

1 A. As of that date; correct.
2 Q. Are you aware of any study that would tell us
3 what the floods would be like if the water from the
4 diversions had been put back in the rivers?
5 A. No, I'm not aware of any such studies,
6 although they may exist.
7 Q. You quote at the bottom of page 95, total
8 runoff for the five months is 2,957,400 acre-feet?
9 A. Yes.
10 Q. That's after diversions; correct?
11 A. Yes.
12 Q. You talk about instability in channel.
13 Could any of the instability of the channel of
14 the Gila River have been caused by the diversions?
15 A. I don't have an answer for that. I don't
16 know.
17 Q. Same question with regard to the obstructions,
18 manmade?
19 A. Yes, I don't know.
20 Q. Do you know if channel shifting is a function
21 of the amount of water present in the river?
22 A. It could be.
23 Q. Middle of page 96, you refer to the Gila River
24 as dramatic fluctuation in flow.
25 Could some or all of this dramatic fluctuation

1 dammed up.
2 A. All I can say to that is I know that in
3 general in the Colorado, it -- the flow is very
4 significant depending on the season of the year prior to
5 the dams being built on the river.
6 Q. Colorado had dramatic fluctuations too, didn't
7 it?
8 A. Yes.
9 Q. On page 97, you have a quote:
10 "There are three streams whose
11 navigability gives them more or less
12 importance as commercial lines, namely:
13 the Columbia, the Sacramento and the
14 Colorado rivers."
15 Are you aware of any other river in the west
16 that's been declared navigable other than those three
17 rivers?
18 A. Have been declared by whom?
19 Q. Anybody, federal government, the state
20 government, any court, any --
21 A. I don't know whether even the Colorado has
22 been officially declared navigable by someone.
23 I have seen documents that suggest large
24 numbers of individuals thought the San Joaquin River,
25 for example, was navigable; Columbia, Sacramento and the

1 been caused by the fact that much, if not all, water of
2 the Gila was being diverted?
3 A. I do not know the answer to the question.
4 Q. If you've got zero because it is all diverted
5 and you have a storm, it's going to be more dramatic
6 than if you had x-amount of water in the river and you
7 had a storm; fair?
8 A. Yes.
9 Q. I take it you didn't do any study that would
10 determine whether these great fluctuations would even
11 out if diversions were restored and the manmade
12 obstructions removed?
13 A. No, I did not do those types of studies.
14 Q. And just because you've got a flood that might
15 make a river not navigable for some period of time,
16 doesn't necessarily mean that that disqualifies a river
17 from being navigable; right?
18 A. That's correct.
19 Q. How do the fluctuations that take place on the
20 Gila compare to the fluctuations on the Colorado when
21 they were in their same kind of regulatory state?
22 A. When both were in their regulatory state?
23 Q. Either unregulated -- in other words, at
24 comparable times and the amount of dams they had in
25 front of them, because I know today they are pretty well

1 San Joaquin.
2 Q. At the top of page 98, you talk about
3 conflicts over rights of way for canal companies?
4 A. Yes.
5 Q. What does that have to do with the
6 navigability of the Gila River?
7 A. It's only that the document addressing the
8 issue of conflicts over rights of way contains a
9 description of how much water was in the Gila. It's not
10 the rights of way itself that was an issue; it's just
11 simply a description that was contained in that
12 document.
13 Q. Okay.
14 There's a quote in the middle of that page;
15 see that?
16 A. Yes.
17 Q. Does that quote support the concept that the
18 diversions that were taking place in the Gila were
19 drying it up?
20 A. Yes.
21 Q. Do you have a feel for when a flood doesn't
22 become a flood any longer but becomes a river with a
23 flow in it that can be used for navigation?
24 A. No, I don't have a specific opinion when it
25 happens.

1 Q. Understand in the southwest, in Arizona, we
 2 call things floods that in other part of the country
 3 they would look at you like you grew horns?
 4 A. Uh-huh, correct.
 5 Q. Because we tend to call anything that puts
 6 water in a river, a flood; right?
 7 A. Correct.
 8 Q. Well, in some cases, our floods last for three
 9 or four months; fair?
 10 A. If you say so.
 11 Q. If you could use a river during that period of
 12 time to navigate it, or to commercially navigate it,
 13 would that qualify to declare a river navigable?
 14 A. It would be one of the factors I would
 15 consider.
 16 Q. But would it be a positive factor?
 17 A. Yes.
 18 Q. On page 102, you refer to the First Annual
 19 Report of the Reclamation Service.
 20 Would that be an acknowledgment that by 1902
 21 virtually all of the water of the Gila River was now
 22 being diverted?
 23 A. Yes.
 24 Q. I take it you agree that navigable -- use of a
 25 river for only part of a year would suffice to have it

1 Q. To put it in the historical context?
 2 A. Yes, but the date he published them is very
 3 close to statehood.
 4 Q. 1911?
 5 A. Yes.
 6 MR. BARKER: I new Dr. Forbes.
 7 MR. HELM: You are old.
 8 BY MR. HELM:
 9 Q. Are you aware that maybe even as we speak, but
 10 at least in modern times, the portions of the Gila River
 11 are used for flow trips?
 12 A. No, I wasn't aware of that.
 13 Q. Modern uses of the Gila River didn't play a
 14 part in consideration of your report?
 15 A. No, the way I structured what I looked at was
 16 that I tried to focus as closely around the time of
 17 statehood as possible, and as the years grew further and
 18 further away from statehood, either prior to or after, I
 19 did less work in those areas.
 20 Q. Faulk's observations are not that of an
 21 observer contemporaneous to statehood?
 22 A. Where are you in my report, now?
 23 Q. 109.
 24 A. You are talking about Odie Faulk.
 25 That's O-d-i-e, and the last name is

1 declared navigable?
 2 A. If it is regularly reliable at regularly
 3 understood times of year, yes.
 4 Q. You state on page 106:
 5 "Moreover, his statement that the
 6 Southern Pacific Railroad ran south of
 7 the Gila River additionally indicates the
 8 Forbes did not think the Gila was
 9 navigable."
 10 How do you come to that conclusion? Is that
 11 just your assumption again?
 12 A. Well, it is not an assumption. He
 13 specifically noted in the quote that precedes the
 14 statement you made that there were steamboats utilizing
 15 the Colorado River, and I took it that his statement
 16 about the railroad running next to the Gila River, if
 17 anything, underscored its lack of navigability, because
 18 he made no similar reference to transportation on the
 19 river, whereas he did note the transportation by
 20 railroad next to the river.
 21 Q. You're reading his mind?
 22 A. I think it is a fair conclusion.
 23 Q. Are Forbes' comments basically to be taken as
 24 of the date he published them?
 25 A. Yes.

1 F-a-u-l-k.
 2 Now what was your question again?
 3 Q. His are not contemporaneous to statehood?
 4 A. No, he is a historian discussing the
 5 historical uses of transportation along the river. He's
 6 talking about historical events, not what is happening
 7 at the time he published his work.
 8 Q. He is getting it, just like you, from other
 9 documents?
 10 A. Yes.
 11 Q. You put in here a reference to Colonel Phillip
 12 St. George Cooke and the floating of his wagons?
 13 A. Yes.
 14 Q. Clearly that would indicate that a wagon
 15 with -- I'm not sure of the size -- but with two
 16 pontoons hung on it could float down the Colorado;
 17 right?
 18 A. The Colorado?
 19 Q. I'm sorry, the Gila.
 20 A. As I indicated in the report, they had great
 21 difficulty in doing so, but it does indicate that they
 22 were capable -- it was capable of being done.
 23 Q. Do we know what kind of wagons and things
 24 we're talking about when we talk about St. George and
 25 his stuff and the next page when you're talking about

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1 Jones?

2 A. I don't recall any descriptions of the wagons

3 themselves other than what appears in my report.

4 Q. Understand, I can perceive a covered wagon

5 from the last John Wayne movie I saw that would draw

6 what, 10 foot of water maybe?

7 A. Right.

8 Q. And in fact, might have made a lousy boat.

9 A. My conception, which is probably like yours,

10 drawn from movies, is probably more what they were using

11 here is something like a buckboard that if they took the

12 wheels off would have created, in essence, a flat boat,

13 that type of vessel. But there isn't anything that

14 specifically describes these wagons that I'm aware of.

15 Q. One could presuppose that they probably drew

16 more water than a flat boat or a canoe?

17 A. It's pure speculation. I couldn't say.

18 Q. Have you ever seen the government statistics

19 that indicate what their recreational numbers are for

20 how much depth you need for a canoe and a flat boat

21 and --

22 A. No, I've never seen those numbers.

23 Q. When you look at the quote on page 111 from

24 Turner, that would make the river navigable under your

25 1912 boating standard, wouldn't it? Give them a couple

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1 United States and Mexico?

2 A. Right, to draw the new boundary after the

3 United States had acquired the Gadsden Purchase.

4 Q. Right.

5 And did you bother to read the Treaty of

6 Guadalupe Hidalgo?

7 A. No, I didn't.

8 Q. One of those famous documents that we all get

9 at some point in --

10 A. Probably read it a long time ago, but I

11 haven't read it recently.

12 Q. Are you aware it talks about the Gila River?

13 A. No.

14 Q. Let me show you that portion of it. I've

15 taken the opportunity to yellow it, if you would just

16 like to read that.

17 A. (Witness reviews document.)

18 Q. Reasonably historic document?

19 A. Yes.

20 Q. What do you make of the statements about

21 navigation on the Gila contained in that article of the

22 Treaty of Guadalupe Hidalgo?

23 A. I don't think the document says the river was

24 navigable. It says, if you read the second page, it

25 says when taken together, I take that to mean that the

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1 extra feet?

2 A. That was Turner's opinion --

3 Q. Uh-huh.

4 A. -- as to what the river was like at the time.

5 Q. Contemporaneous observation?

6 A. Yes.

7 Q. The difference between that and statehood

8 might be attributed to diversions?

9 A. Yes.

10 Q. Do you know where the area of the river is

11 located where Gillespie dam is?

12 A. Only from maps. I have a general idea it is

13 upstream from Gila Bend.

14 A. About how far?

15 Q. I pulled out my maps here and looked at the

16 townships and ranges and sections when I was rereading

17 the report, but I don't recall precisely.

18 Q. Not too far?

19 A. No, not too far.

20 Q. You talk about Emory and his, I guess I'd have

21 to say, early conclusion that it would be navigable and

22 9-years later that it might not be navigable; right?

23 A. Correct.

24 Q. And that second conclusion was made when he

25 was working as part of the Boundary Commission for the

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1 parties that drafted the treaty thought that it might be

2 navigable, and if improvements were needed to make it

3 such, that the taxation for doing that would go to the

4 citizens of both countries, but I don't think it makes a

5 direct statement that it is definitely navigable.

6 Q. Why would they bother stating that navigation

7 on the Gila would be, quote, free and common to the

8 vessels and citizens of both countries, if it wasn't in

9 their opinion navigable?

10 A. Because that's modified by the statement on

11 the second page, if I can read that.

12 It says:

13 "If, for the purpose of making the said

14 rivers navigable, or for maintaining them

15 in such state, it should be necessary or

16 advantageous to establish any tax or

17 contribution, this shall not be done

18 without the consent of both governments."

19 So I take those two things together to say the

20 parties weren't sure whether it was navigable or not,

21 but if it was navigable, and it took additional work to

22 make the Gila navigable, then both governments had to

23 agree to it.

24 Q. Which would make it susceptible, wouldn't it?

25 A. But they are not saying that it is susceptible

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1 of navigation in its existing state.
 2 Q. Did they do a useless thing?
 3 Why were they talking about the Gila River and
 4 navigation, if it wasn't and didn't have any possibility
 5 of being navigable?
 6 A. I think susceptible of navigation means in its
 7 existing state. But susceptible the way you are using
 8 it here means susceptible of being improved to reach a
 9 state of navigability.
 10 Q. Okay.
 11 If navigability means I can make some
 12 improvements, then would you agree that this might
 13 indicate susceptibility?
 14 A. The parties that wrote it thought that it at
 15 least had the possibility, if improvements were made to
 16 it.
 17 Q. Otherwise, they would have been doing a
 18 useless act?
 19 A. Right.
 20 Q. And we wouldn't attribute to two great nations
 21 a useless act, would we?
 22 A. Right, never.
 23 MR. BARKER: Or hardly ever.
 24 THE WITNESS: I could add one further
 25 clarifying note on that, if I might.

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1 really Lt. Mowry. You refer to a speech he gave?
 2 A. Yes, I see that.
 3 Q. Had he ever seen the Colorado River?
 4 MR. BARKER: Objection to the form.
 5 You mean the Gila?
 6 MR. HELM: No, I mean the Colorado.
 7 MR. BARKER: Okay.
 8 MR. HELM: I'll make it a compound question,
 9 if you want.
 10 And the Gila.
 11 THE WITNESS: I don't know that he had seen
 12 the Colorado or not.
 13 BY MR. HELM:
 14 Q. Do you know if he had seen the Gila?
 15 A. I don't know. I assume he had, and I would
 16 say I assumed he had seen both of them, but without
 17 looking at the complete -- his complete article, which I
 18 have long since forgotten, I don't know whether he had
 19 seen them or not.
 20 Q. He is giving a speech back in Washington D.C.;
 21 right?
 22 A. Right.
 23 Q. And he could be getting his impressions from
 24 any number of sources; right?
 25 A. That's correct.

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1 The document was addressing the two rivers
 2 that form the boundaries between the two countries, one
 3 being the Gila and the other being the Rio Grande, and
 4 the Rio Grande was certainly far more capable of
 5 commercial navigation or was capable of it more readily
 6 than the Gila, in my opinion, and I think probably what
 7 they were doing here was simply drafting language that
 8 would have covered both of them.
 9 BY MR. HELM:
 10 Q. Do you believe that channel excavation and
 11 bank stabilization are part of a maintaining a navigable
 12 river?
 13 A. I don't have any knowledge of that or opinion.
 14 Q. Do you think the change in opinion of Emory
 15 could have been as a result of diversions?
 16 A. It could have been. I don't know.
 17 Q. In your opinion does difficulty of navigation
 18 disqualify a river from being navigable?
 19 A. No.
 20 Q. Then why is that an important consideration in
 21 determining its navigability?
 22 A. It's one of many elements that needs to be
 23 examined, but in and of itself, it does not disqualify
 24 navigation.
 25 Q. Referring you to Emory on page 115 -- I guess

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1 Q. Just like politicians today do?
 2 A. That's correct.
 3 Q. We don't know whether Mowry is shooting from
 4 the hip or not, do we, at this point?
 5 A. Well, he was a lieutenant, and my recollection
 6 is most material that I got from descriptions of these
 7 rivers were from parties who had explored the region,
 8 so, again, just working from memory, I would imagine
 9 that Mowry had probably gone into the area to gather
 10 statistics and information, and he was simply describing
 11 what he had seen.
 12 Q. Is his speech in your -- how do we determine
 13 that? Is his speech in your bibliography?
 14 A. It's cited in the footnote at 113.
 15 Q. Page 117, first full paragraph, talking about
 16 nonmilitary boating trips being reported in the press,
 17 and you state:
 18 "...it was reported in the press, more
 19 for its novelty than for being
 20 practicable on a regular basis."
 21 How do you know that?
 22 A. From looking through a large number of the
 23 Arizona historical newspapers.
 24 Q. Did they say that we are reporting this
 25 because it is novel?

1 A. You could tell from the tone of the title of
2 the articles, for example, one of them was something to
3 the effect of -- well, one of the expeditions was called
4 something like the "Yuma or Bust" trip, in the headline
5 of the article that reported on it, which conveyed the
6 information that the boats that had been used to attempt
7 to float from Phoenix to Yuma, the parties in those
8 boats, in fact, had to wade most of the time and push
9 the boats through sandbars and the title of the article
10 was something to the effect of, "The Yuma or Bust
11 Busted."

12 And likewise, my terminology of "novelty" is a
13 reflection of the fact that there were very few articles
14 that discuss any kind of consistent boating, if any.
15 The only articles that appeared were ones that described
16 these somewhat novel attempts to float down the river.

17 Q. The characterization is yours?

18 A. Yes.

19 Q. Page 118, you talk about the Yuma-or-bust
20 statement in that paragraph:

21 "He noted that transportation within
22 Arizona had long gone overland and not by
23 boat on the Gila."

24 I'd like you to point out to me where the Gila
25 is mentioned in the quote.

1 A. It's the use of the all inclusive term "all".
2 "All freight for the interior was
3 transmitted in bull trains."

4 I would take that to mean that none was
5 transported on the Gila.

6 Q. How does that stack up with the other
7 information you have that there were steamboats on the
8 lower Gila, that there were...

9 A. Again, it is one of the elements that I took
10 into consideration in reaching an ultimate conclusion.

11 None of these parties were omniscient in
12 knowing everything that took place about the river.
13 They all offered their own opinions, and I considered it
14 all together.

15 Q. Okay.

16 And turning to the next page, 119, is where
17 you'll find your 7-year steamboat.

18 You state:

19 "Ultimately, he observed, the boat was
20 unable to navigate the Gila on a regular
21 basis."

22 Where does he say that in the quote?

23 A. I think the correct way of understanding this
24 quote is not to read the phrase regarding the ship
25 Explorer as running on the Colorado and Gila rivers

1 until 1864. I don't believe that phrase means that it
2 was run on both rivers consistently until 1864.

3 What I was saying was that it was run on one
4 or the other or both at various times between 1857 and
5 1864.

6 Q. That's putting your spin on his statement,
7 isn't it?

8 A. That's right.

9 Q. All right.

10 It's not what his statement says, is it?

11 A. Not in this quote.

12 Q. And where in the quote does it say that it was
13 unable to navigate on the Gila on a regular basis?

14 A. It doesn't.

15 Q. Okay.

16 That's just a misstatement, isn't it?

17 A. Well, it says that --

18 Q. Or have we got another piece of document
19 somewhere?

20 A. No, it says in the quote (as read):
21 "... when she, [the Explorer], became
22 unmanageable, as she came out of the Gila
23 River, up which she had been after a load
24 of wood. The current of the river
25 carried her down to Pilot Knob where she

1 was made fast to a tree on the bank. The
2 bank caved in..."

3 Q. Where does that say that the boat was able to
4 navigate on the Gila River? That says the Colorado
5 River got it, doesn't it?

6 A. Yes.

7 Q. It is a misstatement, isn't it?

8 A. Yes, although not a deliberate one.

9 Q. I didn't say it was.

10 In fact, wouldn't you agree that if you look
11 at that statement and take it at face value, you've got
12 the Explorer running on the Gila River for 7 years,
13 approximately?

14 A. I'd have to look at the rest of the document
15 to see what other comments were made in order to be able
16 to place it in a greater context.

17 Q. But based on that statement, would you agree
18 with what I just said?

19 A. As I said, I don't believe that it says
20 directly that it was run consistently for 7 years. I
21 could also read that statement to mean that it was run
22 on the Colorado or the Gila at various times between
23 1857 and 1864.

24 Q. But it doesn't say that, does it?

25 It says: "... and run on the Colorado

1 and Gila rivers until 1864...?"
 2 A. Right, but I think you can interpret that to
 3 mean that it was run on both of them either together or
 4 one then the other or --
 5 Q. I'll stipulate with you that it can't be in
 6 two places at once.
 7 A. Right.
 8 Q. So it had to be run on the Gila at one point
 9 and the Colorado at another point and it could never
 10 occupy the same point in time on both rivers.
 11 A. Right.
 12 Q. But doesn't this indicate that it regularly
 13 navigated both of those rivers for 7 years,
 14 approximately?
 15 A. I think one could also make the argument that
 16 it went up the Colorado many times and went up the Gila
 17 only two or three, or one could make the statement it
 18 went up the Gila many times and up the Colorado only two
 19 or three.
 20 Q. Page 120, you indicate that the boating that
 21 occurred on the Gila was only noteworthy for its
 22 novelty.
 23 Do you see that?
 24 Your summary conclusion, last line.
 25 A. Yes.

1 Q. Can we agree that boating on the Gila
 2 indicates that the Gila was susceptible to navigation?
 3 Not commercial navigation, as you use the term, but just
 4 the navigation?
 5 A. At times, yes.
 6 Q. You'd agree with me that the diversions in the
 7 water in the Gila increased over time?
 8 A. Yes.
 9 Q. Started small and snowballed?
 10 A. Yes.
 11 Q. You read the Defenders case?
 12 A. Yes.
 13 Q. Based on that case, are there certain portions
 14 of your report that don't comply with the standards set
 15 out in that case?
 16 A. You mean the descriptions of the
 17 contemporaneous observers?
 18 Q. Well, for example, the idea of having to have
 19 the use of the river be of a commercial nature measured
 20 by the nature of the watercraft in use in 1912 or
 21 thereabouts?
 22 A. Yes, that's correct.
 23 Q. To the extent that you used that to conclude
 24 that it was not navigable, your report doesn't meet the
 25 standard enunciated in that case, does it?

1 A. I prefer to think of it in the context that
 2 the standard enunciated in the case does not agree with
 3 my report.
 4 Q. I'm sure good Judge Patterson would be pleased
 5 to know that, but we've got the picture, I think; right?
 6 A. Yes.
 7 Q. Do trade and travel have to go both up and
 8 down the stream?
 9 A. I don't believe so.
 10 Q. Downstream would be enough?
 11 A. I believe so.
 12 Q. Does regulation by the United States, under
 13 the Rivers and Harbors Act, of a river determine its
 14 navigability as of statehood?
 15 A. It is one of the elements that I would
 16 consider.
 17 Q. Why?
 18 A. Because my understanding was that the 1899 law
 19 required anyone -- and it's been a long time since I
 20 looked at that law -- but required anyone who wanted to
 21 put an obstacle into a river, such as a dam or a wharf
 22 or other obstacle, needed to clear it with the War
 23 Department to make sure that they were not obstructing a
 24 navigable waterway.
 25 Q. Did you consider that in your report?

1 A. I didn't address it in this report.
 2 Q. The Gila River Navigability Study, you've
 3 subsequently had an opportunity to read that; right?
 4 A. Yes, I read it last week or the week before.
 5 Q. Have any major disagreements with the
 6 statements contained in it?
 7 A. I don't remember anything specific that I
 8 agree or disagree with.
 9 Q. On section iv-22 of that report, the author
 10 states: A review of the survey plats indicate that the
 11 Gila has moved periodically, considerably in some
 12 locations and negligibly in other locations.
 13 Do you agree with that statement?
 14 A. In general, yes.
 15 Q. Do you have an opinion whether the Gila would
 16 be navigable for any part of the year if the manmade
 17 obstructions were removed and the diversions of water
 18 stopped?
 19 A. I don't have an opinion on that particular
 20 point.
 21 I am aware that there were more flows in the
 22 river prior to diversions and manmade obstructions.
 23 Q. How come all of the surveyor manuals, all of
 24 those different years, how come they were always being
 25 rewritten so frequently? Is it just because they were

1 providing inadequate methodologies to survey as America
 2 moved westward?
 3 A. I think the revisions were in response to
 4 differing circumstances that emerged over time.
 5 The reason for the original survey manual in
 6 1851 or 1850, was that California, due to the gold rush,
 7 and Oregon, due to settlers moving there was -- and also
 8 obtaining California at the end of the Mexican war, made
 9 it necessary for the U.S. government to set up some sort
 10 of orderly means of transferring the public domain out.
 11 So they attempted to standardized what they had done
 12 individually through letters and contracts earlier, and
 13 I think as they discovered manuals had problems in
 14 certain areas, they attempted to address those problems
 15 with corrections and revisions.
 16 Q. And the fact that we had all of these
 17 revisions indicates that there were problems?
 18 A. Right, one specific one that comes to mind
 19 with regard to meanders is the 1902 manual where the
 20 instructions pointed out that surveyors had been
 21 meandering things in some cases that shouldn't have been
 22 meandered, such as I believe it was Indian reservation
 23 boundaries, and they wanted to be more precise in
 24 spelling out what should and should not be meandered.
 25 But I think the revisions in the other manuals may have

1 have needed to have in the Gila River in 1912 to make it
 2 commercially navigable?
 3 A. No, I can't.
 4 Q. Can you define for me how much water we would
 5 have had to have in the Gila River in 1912 to just make
 6 it navigable?
 7 A. No, I can't.
 8 (Discussion off the record.)
 9 (Recess ensued beginning at 4:10 p.m.)
 10
 11
 12 Douglas R. Littlefield, Ph.D
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1 had to do with areas that had nothing at all to do with
 2 rivers or navigability.
 3 Q. But there were just inadequacies in the
 4 instructions on some topic?
 5 A. Yeah.
 6 Q. Do you have any feel for what size of a
 7 diversion it would take to affect the navigability of
 8 the Gila River?
 9 A. No, none whatsoever.
 10 Q. So you couldn't tell me whether 4 or 40 CFS
 11 would make a difference or not?
 12 A. No.
 13 Q. Or 90 million CFS for that matter?
 14 Did you know of any way to determine the
 15 amount of flow at the Gila River at the time of each of
 16 the land surveys that you've used in your report?
 17 A. I'm not aware of any way to do that now.
 18 Q. At least in the later time frame, there would
 19 have been USGS records, wouldn't there?
 20 A. Yes.
 21 Q. Did you make any attempt to get the USGS
 22 records or flow records and compare them to the
 23 decisions that were made by the surveyors?
 24 A. No, I did not.
 25 Q. Can you define for me how much water we would

1 STATE OF ARIZONA)
 2 COUNTY OF MARICOPA) SS.
 3
 4
 5
 6 I, Melissa Gonsalves, Arizona CCR 50070,
 7 Certified Court Reporter, do hereby certify:
 8 That I am the reporter, duly appointed and
 9 sworn, who reported the above and foregoing proceedings
 10 at the time and place therein stated;
 11 That I reported the said proceedings; and
 12 that the foregoing pages are a full, true, complete and
 13 correct transcript of my shorthand notes taken at said
 14 time and place to the best of my ability.
 15 Dated this ____ day of _____, 2001.
 16
 17
 18
 19 Melissa Gonsalves, RMR
 20 Arizona CCR No. 50070
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Deposition of Douglas R. Littlefield, Ph.D.

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IN THE SUPERIOR COURT OF THE STATE OF ARIZONA
IN AND FOR THE COUNTY OF MARICOPA

FLOOD CONTROL DISTRICT OF)	
MARICOPA COUNTY,)	
)	
Plaintiff,)	
)	
vs.)	No. CV97-07081
)	
PALOMA INVESTMENT LIMITED)	
PARTNERSHIP, a limited partnership;)	
et al.,)	
Defendants.)	
)	
<hr/>		
PALOMA INVESTMENT LIMITED)	
PARTNERSHIP, a limited partnership;)	
et al.,)	
Plaintiffs,)	
)	
vs.)	
)	
FLOOD CONTROL DISTRICT OF)	
MARICOPA COUNTY,)	
Defendants.)	
)	
<hr/>		

DEPOSITION OF DOUGLAS R. LITTLEFIELD, Ph.D.

VOLUME II

Phoenix, Arizona
May 25, 2001
4:15 p.m.

CONDENSED COPY

Rebecca Beck, #50317
Certified Court Reporter



Deposition of Douglas R. Littlefield, Ph.D.

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SHEET 2 PAGE 2

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2 WITNESSES

3 DOUGLAS R. LITTLEFIELD

4 Examination by Mr. Helm 4

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7 E X H I B I T S

8 Number Description Page

9 None Marked

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PAGE 3 3

1 DEPOSITION OF Douglas R. Littlefield, Ph.D.

2 taken at 4:15 p.m. on May 25, 2001, at the offices of

3 Flood Control District of Maricopa, 2801 West Durango,

4 Phoenix, Arizona, before REBECCA L. BECK, a Court Reporter

5 and Notary Public in and for the County of Maricopa, State

6 of Arizona, pursuant to the Rules of Civil Procedure.

7 The Plaintiffs/Counterdefendants were

8 represented by their attorneys, Helm & Kyle, by Mr. John

9 D. Helm and Patricia L. Barfield.

10 The Defendants/Counterclaimants were

11 represented by their attorneys, Mesch, Clark & Rothschild,

12 by Mr. J. Emery Barker and Patricia L. Barfield.

13 BE IT REMEMBERED that the witness will read

14 and sign the deposition, and notice of filing and other

15 formalities required by law for the taking and returning

16 of the said deposition are waived.

17

18

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25

PAGE 4 4

1 Douglas R. Littlefield, Ph.D.,

2 called as a witness herein, having first been duly sworn,

3 was examined and testified as follows:

4

5 EXAMINATION

6 BY MR. HELM:

7 Q On the patents that you reviewed and used --

8 A Yes.

9 Q -- did you have any consistent methodology

10 for the date that you selected to denominate the patent?

11 Do you understand what I mean? In other words, you said

12 this patent was given in 1904. There is a date of

13 application --

14 A I know that --

15 Q Do you remember what -- I mean, --

16 A It's usually --

17 Q Light years apart?

18 A Usually it's just two or three for homestead

19 patents.

20 Q Which did you use?

21 A I had both the patent file which contained

22 the application and the supporting documentation and the

23 patent itself. I got the patent from the BLM offices in

24 Phoenix and then I pinged the patent file from the

25 National Archives in Washington D.C.. When I talk about

PAGE 5 5

1 the date of the patent I'm talking about the date of

2 award, the date of the final patent transferring title to

3 the individuals.

4 Q And that's to the best of your recollection

5 how you consistently used those dates, it would be the

6 date the patent was awarded?

7 A Unless it's identified in some other manner

8 in the report. By and large, they were all the date they

9 were awarded.

10 Q Referring you back to Page 41 and 42.

11 In that paragraph you are talking about White

12 meandering the Gila River and how he did the right bank

13 and switched to the left bank and you state that he

14 indicates in his notes that he shifted from the one bank

15 to the other as the survey instructions provided because

16 of the difficulty in finishing the one bank.

17 Q Could you show us in his notes where he said

18 that?

19 A This is a really difficult copy to read.

20 This is about a fourth-generation photocopy.

21 Q That's what you gave me.

22 A I don't know where it is in his notes and I'm

23 not going to be able to find it in this copy because the

24 quality of the copy is so poor.

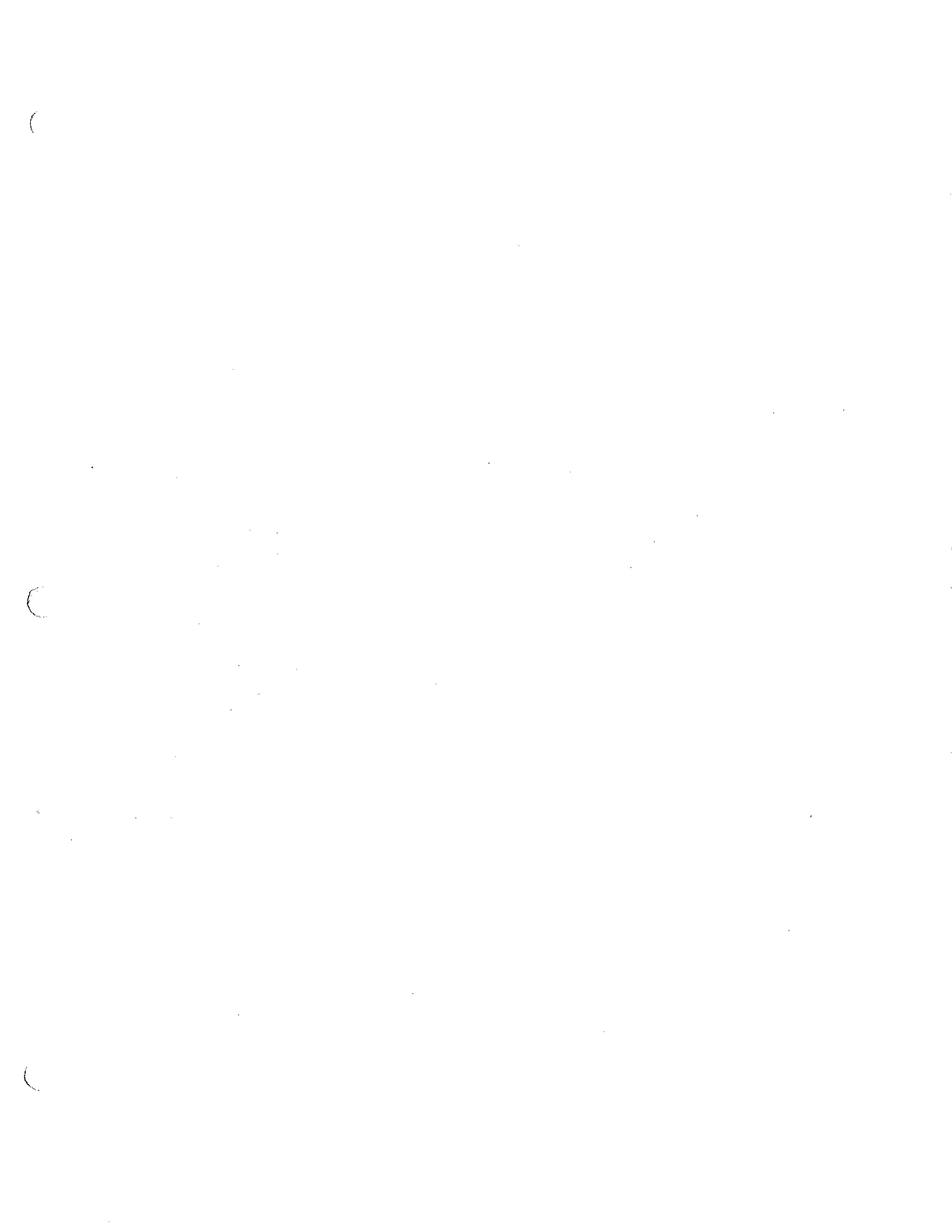
25 Q Would you like to review your copy

1 A Yes.
2 Q -- and advise me by writing where it's
3 located?
4 A Yes, I will do that.
5 Q Okay.
6 A I'll pass it onto Emery and he can pass it on
7 to you.
8 Q That's fine.
9 MR. HELM: Okay. I guess I'm done until I
10 get my hands on the rest of the documents --
11 THE WITNESS: Okay.
12 MR. HELM: -- and determine whether I have
13 any other questions, and I can't do that until I have a
14 fight with Salt River Project, I guess.
15 THE WITNESS: Okay.
16 MR. HELM: Or whoever else I need to have one
17 with.
18 Maybe they will go quietly. So I take it as
19 of this -- hold on.
20 Q BY MR. HELM: Was flooding of the Gila River
21 around the time of statehood unusual?
22 A What's the question again?
23 Q Was flooding of the Gila River around the
24 time of statehood unusual?
25 A I don't know the answer to that question.

0008
1 C E R T I F I C A T E
2 STATE OF ARIZONA
3 County of Maricopa
4 BE IT KNOWN that the foregoing deposition was
5 taken before me, REBECCA L. BECK, a Notary Public in and
6 for the County of Maricopa, State of Arizona; that the
7 witness before testifying was duly sworn by me to testify
8 to the whole truth; that the questions propounded to the
9 witness and the answers of the witness thereto were taken
10 down by me in shorthand and thereafter reduced to
11 typewriting under my direction; that the foregoing 07
12 pages are a true and correct transcript of all proceedings
13 had upon the taking of said deposition, all to the best of
14 my skill and ability.
15 I FURTHER CERTIFY that I am in no way related
16 to any of the parties hereto nor am I in any wise
17 interested in the outcome hereof.
18 DATED at Tempe, Arizona, this 29th day of
19 May, 2001.
20
21 Rebecca L. Beck, #50317
22 Certified Court Reporter
23
24
25

1 MR. HELM: Now I guess adjourn.
2 MR. BARKER: Now we're done?
3 MR. HELM: Yes. I'm reserving the right to
4 call you up if SRP sees the errors of their ways or you
5 see the errors of your ways.
6 (Discussion off the record.)
7 (Whereupon the Deposition was concluded at
8 4:25 p.m.)

Douglas R. Littlefield, Ph.D.



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