STATE OF NEW MEXICO 1 COUNTY OF LEA 2 FIFTH JUDICIAL DISTRICT COURT 3 REPUBLICAN PARTY OF NEW MEXICO, 4 et al., 5 Plaintiffs, Case No. D-506-CV-2022-00041 б v. 7 MAGGIE TOULOUSE OLIVER, et al, 8 Defendants. 9 10 11 12 TRANSCRIPT OF PROCEEDINGS 13 September 28, 2023 14 15 16 17 18 HEARD BEFORE: 19 THE HONORABLE FRED VAN SOELEN 20 21 TRANSCRIBED BY: 22 PAUL BACA PROFESSIONAL COURT REPORTERS 23 500 4th Street, Northwest, Suite 105 Albuquerque, New Mexico 87102 24 **Unless provided, spellings of all names 25 are phonetic.

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TRANSCRIPT OF PROCEEDINGS 1 2 THE COURT: Go ahead and be seated. Thank 3 you. Mr. Trende, you can go ahead and -- is 4 5 there anything we need to take care of beforehand? б Okay. Let's -- let me get. 7 MR. HARRISON: Yes, your Honor. We were just hoping to get an update on the document 8 9 production and the production of witnesses. 10 Okay. All right. So we are THE COURT: 11 back on the record in Lea County Cause Number 12 CV-22-041. As far as the documents, Ms. Sanchez? 13 14 MS. SANCHEZ: Yes, thank you, your Honor. Ι 15 have several updates for the Court and plaintiffs' 16 counsel. One, just wanted to close to loop on the 17 18 declaration from Raul Burciaga about Leann Leith. We 19 did provide that to the Court and plaintiffs' counsel 20 yesterday afternoon. I think that clarifies that on 21 the legislative session on redistricting, she was an employee of the legislature. 22 23 She was paid by the legislature. She 24 had a title, I think, that was -- find it. Her 25 position was leadership analyst, and she had an

office in the roundhouse during that time. I think that that captures the information that the Court wanted some clarity on in terms of Ms. Leith's role. I think it clarifies that she was not sort of an outside advocate, outside of the process, but rather was an employee of the lecture in that position engaging in work on behalf of the legislature.

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THE COURT: Mr. Harrison.

9 MR. HARRISON: Yes, your Honor. So, of 10 course, we're not waiving our original position.

THE COURT: Right.

MR. HARRISON: But under the Court's order, we accept that. Now, that's still -- that puts her within the privilege group, but we would still gets her communications with outsiders, but just not with Brian Egolf, et cetera. Your Honor, insiders to the privilege is our understanding of what that means. But we accept -- we don't like it, but we accept it.

THE COURT: Okay. All right. Ms. Sanchez.

MS. SANCHEZ: And we agree with that same analysis. So we have been endeavoring to do, your Honor, is burning the midnight oil to make sure we get this done as quickly as we can. We know the Court's on a tight time frame, and we want to accomplish that as much as we can.

So we have -- let me just pull up thank 1 2 you right thing here. Sorry. 3 Okay. So -- and my understanding, based on our discussions yesterday, is we're focusing on 4 5 the trial subpoenas, the document requests within those trial subpoenas. I do have confirmation that б 7 the -- those subpoenas have been served on three legislators and Ms. Leith. Mr. -- Senator Cervantes 8 9 has not been served. He has been traveling out of town or out of state for a week or two now. But the 10 11 others have been served. The contours under the Court's ruling of 12 13 the legislative privilege, we've been looking at how 14 we can identify category -- documents that are 15 responsive within that category, sort of 16 communications with members of the public, using that term the Court used generally, and trying to figure 17 18 out how we can do searches of those for these 19 individuals as quickly as possible to make production 20 as quickly as possible. 21 We have gathered, so looking at just the 22 year 2021, which was the redistricting year, the 23 total number of e-mails. So at the legislature, 24 there's a centralized IT person, department. And 25 they have administrative access. So without having

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individual legislators have to actually go into their 1 2 e-mail accounts, which they may or may not know how 3 to do, the IT department can do that. 4 So the IT department has pulled the 5 e-mails for these individuals for 2021. That's over б 32,000 e-mails total that would need to be searched. 7 What I am proposing to the Court, and, again, this is keying off of the terms that are in 8 9 the plaintiffs' trial subpoenas, is that we use 10 really all or most of all of the search terms that 11 are included in those subpoenas. I'm just going to get one in front of me for reference. And looking at 12 the legislative process, trying to define that, so we 13 14 have a date range that we don't have to search the 15 entire calendar year. Because I think that's -- it 16 would help to hone it down a bit. If we use July 1st of 2021 as our 17 18 starting point, that's when this CRC really began its work, sort of in that role with the interim 19 20 legislative committee having meetings, developing 21 plans, and then through the date of passage of SB-1, 22 which is on December 11th, 2021. 23 So we take that July one to December 24 11th, 2021, time frame, apply the search terms that 25 are contained in the plaintiffs' subpoena for, you

know, the -- I guess they call they'll bullion search 1 2 terms, but they're just word searches that you 3 conduct on the e-mails. And we would apply the same 4 thing to the -- to text messages, same date range, word searches, to the extent you can search for text 5 б by words. 7 The one problem that we're running into as we've started applying these things overnight, and 8 9 one problem that we're running into is that some of 10 these are pretty overinclusive. Given the Court's ruling on sort of which communications -- because 11 12 we're obviously going to be pulling up a lot 13 communications that are privileged and then having to 14 sort through that. 15 So what would help that process is if we can identify individuals we're looking for 16 communications with. And those subpoena lists, 17 18 several of them that fall sort of into the Court's 19 category, and that would be the congresswoman from 20 CD-1 and CD-2, Stansbury and Leger Fernandez, their 21 respective staff people, I guess, Scott Forrester and 22 Kyra Ellis-Moore. And then there's an individual who 23 I believe is with Center for Civic Policy, Oriana 24 Sandoval is listed.

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And so if we can use that list that's in

the subpoena as sort of the to/from list, then that 1 2 would be helpful. 3 And I'm just trying to be very transparent and concrete with the Court about what 4 5 we're proposing to do. I don't -- I want to make б sure that we're doing everything we can to fulfill 7 the Court's order and to do it as quickly as we can to get documents to plaintiffs' counsel before any 8 9 final submissions go to you, before you have to make 10 your decision. 11 THE COURT: Okay. 12 Mr. Harrison, as far as -- how do you 13 proposal that... 14 MR. HARRISON: Yes, your Honor. So the 15 time -- we had picked a couple of time frames, but we 16 would be willing to accept the start date of July 17 I think one of -- we have three time frames, lst. 18 but we'd be willing to forfeit the other two and use 19 our July 1st. 20 Now, we had our December 18th, which I believe is the governor's signature date. And I 21 22 think the date quoted by Ms. Sanchez was the passage 23 of the legislature. 24 We'd ask for the 18, just because we 25 presented the Court with an e-mail from Senator

Cervantes that was immediately after passage. 1 2 THE COURT: December 18th, 2021? 3 MR. HARRISON: 2021, yes, your Honor. But that -- we're close on that. And so, you know, if 4 5 there were -- unfortunately, without a sophisticated, б you know, like a third party, you know, IT vendor, 7 this could be done pretty easily, because you just filter out -- you know, you list in the legislators 8 9 and you filter out anything that was exclusively 10 circulated to the legislators. Which here, I think, 11 probably the easiest way would be to eyeball it. Our subpoenas, I do want to -- I don't know that they --12 we do want to be avoid being ridiculous overbroad. 13 14 Now, what they are is they're law. And 15 if you think about it, to use an easy example, saying 16 give me docks that have the words X and Y and Z captures a lot fewer documents that say give me all 17 18 the documents that capture X, right? But it's a longer subpoena. And that's kind of what we have 19 20 with our subpoena. 21 We'd will willing at this point to reconfigure and to give them something shorter. 22 Ι 23 mean, we can keep it to a page easily and -- but I 24 don't know that it really is easier in the long run. 25 The only -- I guess actually, my biggest

concern from what was proposed, is we individually 1 2 served legislators as people, and we would like 3 (inaudible) we ask for any type -- you know, text messages, Facebook. I don't necessarily every 4 5 legislative -- a legislator has four e-mail accounts, б to search all four. But they know and they have an 7 ethical obligation in any -- you know, any one a subpoena in any case. They know what they use. 8 9 Like, they're -- I mean, I work with political 10 figures, and there are some people who always use 11 their campaign account.

12 Jay (inaudible), Jake for New Mexico dot-com. 13 There's some people who will use a personal 14 account set up for that purpose. You'll still run into some older folks who use, like, the prodigy, you 15 16 know, legacy type accounts. I don't think I've ever 17 known anyone, I'm sure I can't think of anyone that I 18 transact my business with who uses their legislative account probably because it is, as we learned in one 19 20 of the depositions of the IT people, they do conduct 21 IPRA searches of those periodically.

And so, you know, we would ask for each legislator to go through. And, again, it doesn't take forever. I ran one of these on mine. I may be for tech savvy than the average legislator. And it

takes an hour. That didn't include -- that included 1 2 just doing the searches, not pulling the documents 3 over to a file. That wouldn't take that long either. But, you know, we would ask that 4 5 legislators check their text messages, check the б e-mail accounts they know they use to conduct that 7 type of business. And, like I said, we can simply this, and we'd certainly be willing to keep it to a 8 9 single date range to July 1st to December whatever, 10 whichever date the Court decides is the relevant 11 date, legislative passage or gubernatorial signature. But we would ask for each legislator to make a 12 13 decision based on what they know they use. Right? 14 And for some that will be -- I'm totally 15 fine if, you know, a legislator who knows that they 16 don't have a text, you know, about politics, doesn't check their text. But a legislator who does, should 17 18 check their texts and produce any text messages that 19 are responsive and non-privileged on the Court's 20 ruling. 21 All right. Did I hear earlier THE COURT: 22 that they -- you've already had them run a search and 23 there's thousands? 24 MS. SANCHEZ: So we're -- we've already 25 pulled the sort of universe of potential e-mails on

the legislative e-mails account, and there are --1 2 THE COURT: Are those just government 3 accounts? MS. SANCHEZ: Just in the legislative 4 account. That's the only one we have a centralized 5 б IT for. 7 THE COURT: Okay. MS. SANCHEZ: And that is the universe is 8 tens of thousands. But I'm confident that applying 9 search terms will narrow that down. Really, we're 10 11 just kind of in a race against the clock here, your 12 Honor. And really, the more we ask people to do, 13 especially if we're asking legislators to search, 14 some of them, I don't know if it's a gmail or an AOL, 15 or whatever people may have, searching those can be 16 pretty cumbersome and difficult. I don't want to represent that there's 17 18 been a thorough search be of an e-mail account by an individual who really is not familiar with how to 19 20 search that. You know, if -- if they can do it, fine. But -- but I'm -- I want to propose something 21 22 where we are getting -- where we're making this 23 production, you know, no later than Tuesday, and not 24 an as a tight -- that's going to be tight already. I 25 mean, I have people already starting to apply terms.

I wanted to get a start overnight, but it's going to 1 2 be tight already. 3 I do agree. I think we should have folks search their text messages. I'm not objecting 4 5 to that. I think that the text message searchings is б really only feasible if you can -- because you can't 7 do sort of one unified search of all our text messages, at least not very capably when you're 8 9 searching for things two years ago back. 10 THE COURT: Mm-hmm. 11 MS. SANCHEZ: So if we can narrow that at least to that sort of list of sender and recipients 12 that are contained in the trial subpoena, I think 13 14 that would make it easier for people to search text 15 messages and try to identify if they have any 16 responsive ones. Okay. And I -- I don't know 17 THE COURT: 18 what the subpoena is directed towards. Is it two 19 certain recipients? 20 MR. HARRISON: So -- and to be clear, are we talking about the six -- the six trial subpoena... 21 22 MS. SANCHEZ: I think that's certainly what 23 I'm working off of. My understanding is the ship has 24 sort of sailed for the 80 discovery subpoenas. But we're focusing on to be trial subpoenas. 25

For example, in the text message 1 2 section, I'm looking at one of the legislator 3 subpoenas. In the text message section, it asks for text messages send or received by you, it says, 4 5 anytime in 2021. But if we're limiting it -- between б you and one or more of the following individuals. 7 And then I'll just read the ones that don't fall into the privilege category: Kyra Ellis-Moore, Scott 8 Forrester, Teresa Leger Fernandez and Oriana Sandoval 9 10 and Melanie Stansbury. 11 So that -- if the -- I think if we -- if 12 we use that list for searching the text messages, I 13 mean, there -- the request goes on to be broader than 14 that. I mean, there's even a request for all text 15 messages during the period of the legislative session 16 that they sent to anybody who is not themselves or immediate family member. I mean, we can't do that. 17 18 But if we limit to the individuals that are being requested for, I actually think that that's 19 20 doable and that we can search text messages and 21 produce those. 22 THE COURT: Mr. Harrison. MR. HARRISON: To be clear, the broadest in 23 24 scope was limited in time to a four-day period, what 25 we thought was the four most likely.

I mean, we did craft these with --1 2 contemplating the fact that -- like, there are no 3 sophisticated search terms that we've asked to conduct on text messages. We did things like, within 4 5 this time frame, give us your texts with so and so. б And the expectation was, if it happened 7 to be the case that /STPHEUB, you know, texts with, you know, hey, I text with this person all the time, 8 I've got a thousand text messages, okay, sorry, "Can 9 you go in there" -- on an iPhone, for example, you 10 11 can run a simple word search, and, "Can you give us everything that says district? Or, if you'd prefer, 12 13 just do a qualitative review and send up everything 14 that related to redistricting. Is that a manageable 15 number of texts?" 16 And that would normally be the type of thing that would get talked about and we're doing 17 18 with Ms. Ellis-Moore. I expect to have her issues 19 resolved. 20 And, again, I want to both address the situation I know we're at now, which is what's 21 22 important --23 THE COURT: Mm-hmm. 24 MR. HARRISON: -- but to also, you know, 25 memorialize my complaint that we served these back in

The normal expectation is, and, you know, 1 July. 2 there's case law on this, you collect the documents and you call it a privilege log, call it what Rule 26 3 calls it, which is, you know, a -- shall describe the 4 5 nature of the documents, communications of things not produced and disclosed in a manner without revealing б 7 itself privilege or protected will unable other parties to assess the applicant of the privilege or 8 9 protection.

10 That's from the rules of civil 11 procedure. You know, that process would have allowed 12 this to go smoothly. And there was more than enough time. We would contend that even given that they had 13 14 a colorable privilege claim, the reality is that, 15 yeah, having to do everything now, starting on day 16 two of a three-day trial is going to be tough. And we want to -- obviously, we (inaudible) work with the 17 18 situation that we're at, but not let it escape the 19 Court's notice because we're -- you know, anything is 20 impossible when you wait late enough before the 21 deadline.

THE COURT: Okay. And all of that is clear and it's on the record, that you've raised that.

As far as practicality, I do have a question about this. What -- you know, I think you 1 were saying by Tuesday you're hoping to have all this 2 done? What is the point of get all this after the 3 trial's over.

MR. TSEYTLIN: Well, your Honor, I think with the reality -- with all candor, they should be able to search all their personal e-mail accounts and text messages and introduce everything by tomorrow morning. It's not that hard over a short period of time to search the accounts that we know that we use.

This is frankly, an attempt to run out the clock on something that should have been done since July. But I'm very cost you tell five people, "Everything you sent about redistricting in a couple month period, give that, court order, give that by tomorrow morning," we'll get that information.

16 You know, if they have other things they want to produce on a rolling basis thereafter and we 17 18 can supplement to the Court, that's fine. But I think that there should be an order that by tomorrow 19 20 morning, at least for the trial deponents, they got to search the personal text messages, e-mail 21 addresses, WhatsApp, Facebook that they use and 22 23 everything about redistricting to the public as 24 defined in the court, is turned to us by 8:00 a.m. 25 tomorrow, so that when these folks come in, we can --

1	we can ask them things like, "Were you sending
2	messages to other people about this?"
3	Obviously we can't inquire about the
4	contents of the messages they turn over, but we can
5	say, "Hey, you turned over this stuff to us," you
6	know, this person and that person texted this, "Did
7	you text anybody else?" Things of that sort.
8	So that, I think, is imminently
9	manageable. I think it's entirely not credible to
10	say that five people can't look at their commonly
11	used medium of communications in a 24-hour period in
12	order to comply with a court order.
13	THE COURT: All right. As far as the
14	and, again, I don't know what the subpoena says. I
15	know it's broad. But you're saying that you're
16	willing to narrow it down to certain people they're
17	communicating with?
18	MR. HARRISON: Yes, your Honor. Well, I
19	mean
20	THE COURT: Well, who are those people?
21	Tell me who they are.
22	MR. HARRISON: I think you're your Honor
23	said Lisa Curtis couldn't be asked. So Kyra
24	Ellis-Moore, Scott Forrester. Dominic Gabello is in
25	another gray area. Ms. Leger Fernandez, Oriana

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1	Sandoval, and Melanie Stansbury. But go ahead.
2	So what my colleague pointed out, so
3	that is a way of doing, quote, unquote, search terms,
4	right? And so when we send it out to a large number
5	of people, the general rule is, if you've got a ton
6	of e-mails, if you do have 10,000 e-mails that are
7	potentially responsible on a given topic, search
8	terms are easier to use than a qualitative
9	description of, "Hey, give me everything that relates
10	to redistricting and mentions in any way political
11	composition." Right? If you have a small number, if
12	you're sitting there thinking, oh, yeah, I texted
13	with two people about this and I remember it, then
14	it's way easier to get a qualitative description like
15	the one I just gave, quote, any communications that
16	that relate to redistrict and mention in any way, you
17	know, the partisan composition of the districts.
18	We would take if the later is easier,
19	then we'd take it. Now, my expectation, and you send
20	out 80 subpoenas, is you're going to set at least
21	some people who say, "That's impractical for what I
22	have on my computer and my phone because, " whatever,
23	"I was tasked with doing the map drawing."
24	So search terms for some people can be
25	easier, but if it is more manageable for the

legislators to do a qualitative search, we would be 1 2 willing to accept, like I said -- I think probably what I just said, e-mails, text messages, whatever 3 form of, medium of communication you use within the 4 5 time frame of July 1st to December 18th of December б 10th, depending on what the Court prefers, that 7 relate to the subject of redistricting and mention in any way the political or election outcome likely mood 8 9 effect of the new district.

And I can clean up that language, but, you know, that mention D v. R percentages or named candidate percentages in connection with the communication. So, I mean, we could probably trade the admittedly far longer subpoenas that -- although, again, I will push back to say they're overbroad, they're just kind of are long.

We'd be willing to trade all that for 17 18 that kind of qualitative, you know, three-prong test. The limited time frame and at -- you know, that you 19 20 search whatever accounts you use and then search -do just a qualitative search based on a combination 21 22 of your memory and who you know you talked to and 23 eyeballing the communications and then produce those. 24 And, again, I think if it's conceptualized, the way 25 that we served these subpoenas, which is on

individual legislators, it just is not that 1 2 burdensome for Mimi Stewart or Joseph Cervantes to 3 sit down and take an hour or two doing this. You know, it's unfortunate, they're 4 5 But, your Honor, there are burdens of nonparties. б litigation, and it just can't be the case that -- you 7 know, we were diligent in serving -- in fact, most of these folks got -- the trial folks have gotten three 8 9 subpoenas requesting the same documents. They got a 10 document subpoena with everybody, a deposition 11 subpoena for a deposition they didn't sit for, that 12 reiterated the same document request, and then a trial subpoena for a trial they haven't showed up to 13 14 that reiterated the exact same document request. 15 So it can't be the case, and we move to compel, we've done all the right things, not just for 16 a redistricting trial. No trial works, right, if the 17 18 plaintiff can -- can do all the right things to compel evidence, not get any evidence, and then be 19 20 penalized for not having any evidence? 21 Right. So the people that these THE COURT: subpoenas are going to, you -- that's who you're 22 23 speaking for right now? 24 MS. SANCHEZ: Yes. I am speaking for 25 Senator Wirth, Senator Stewart, former Speaker Egolf,

and Ms. Leith. And Senator Cervantes has not been 1 2 served with a subpoena. So --3 THE COURT: Didn't you say he was available? He's been traveling. 4 MS. SANCHEZ: No. 5 He's the one that's been traveling. He hasn't been б served with a subpoena. 7 THE COURT: Okay. I have a number of responses, 8 MS. SANCHEZ: 9 and I don't think it's worth rehashing the history of 10 how we got here. I am concerned that plaintiffs are really raising criticisms of the Court and its 11 12 handling of these things, and I think that's not 13 appropriate. 14 But I -- I'm reiterating what the Court 15 made clear yesterday, which is given the Court's 16 ruling about the scope of the privilege and that 17 these individuals being considered within the 18 privilege are not compelled to be requested or asked about these communications, what we're talking about 19 20 here is document production. We are not talking 21 about bringing people in to testify about their 22 communications. We are talking about contemporaneous statements to the plaintiffs, which the Court said 23 24 those statements have to speak for themselves. And 25 we need clearly structured search terms on parameters

1 to comply with, so that I can make sure that we are 2 accurately complying with what the Court wants us to 3 do.

It sounds to me as if plaintiffs' counsel aren't sure what they want. And at this late juncture, it's very hard to tell people, "Well, just use your memory and try to come up with what you think is relevant." I don't feel comfortable as an attorney giving people that instruction. So I think we need a list of clear search terms.

11 And the other piece of this, your Honor, 12 and what makes it frankly impossible to produce anything tomorrow, is that we have to review the 13 14 documents before they're produced. We have to review 15 for attorney-client privilege, we have to review them 16 for responsiveness to this search. I mean, we can have people do a first cut, but they're not going to 17 18 exactly understand what the contours are of what's responsive or what's not, or what's privileged and 19 20 what's not, you know, if there's an e-mail with a staff member that slips through. 21

22 So we have to conduct a review. I'm 23 committed -- I'm spend my weekend doing this. If I 24 can get it out first thing Monday, I'll get it out 25 first thing Monday. But if the plaintiffs find that

there's something relevant in this production, they 1 2 still have time to make a something else, a 3 supplemental something else to the Court. I think the Court was indicating that it 4 5 would be open to receiving some updated findings and б conclusions after the trial. If the plaintiffs find 7 something in here that they think is useful for their case, they could submit it to the Court then in time 8 9 for the Court's final decision. 10 But we are talking about document 11 production under the trial subpoenas, and I'm trying 12 to --13 THE COURT: So what terms would you all 14 propose for search? 15 MS. SANCHEZ: I would propose, and this is taken from the subpoena, and I -- it's going to sound 16 a little funny, because they -- there's different --17 18 search terms are sensitive to punctuation and capitalization and spaces and all that sort of thing. 19 So I have -- well, we couldn't -- would 20 the Court like a copy of one of these trial subpoenas 21 to look at? 22 23 THE COURT: No. 24 MS. SANCHEZ: Okay. I get it. That's fine. 25 So here's the list that I started

putting together. S.B.-1 with periods after S and B. 1 2 SB1 with no periods and no spaces. No SB-1. We should probably at SB space 1, Concept H, Concept E, 3 CCP map, People's map, Chaves map, CD-2, CD 2 without 4 5 a dash. We should probably add CD separation 2. The б word congressional, the word gerrymander, the name 7 Yvette and the name Harrell. That's the list that I have so far. 8 Ιf 9 plaintiffs want to add some to that list, that's 10 fine. But I think we -- the more concrete we can be 11 about what we're searching for, the better. 12 THE COURT: Do you have anything you'd like to at to that list? 13 14 MR. HARRISON: DPI. 15 You have something? 16 Sanderoff. 17 Is that okay? 18 I think -- I think that would be acceptable, your Honor. 19 20 THE COURT: All right. So with those two added terms, DPI and Sanderoff? 21 22 MS. SANCHEZ: I'm happy to include the 23 search term Sanderoff, the -- the under the Court's 24 ruling, Mr. Sanderoff isn't himself as a -- /SPHAOUPB 25 communicating with as a consultant.

THE COURT: Why Sanderoff. 1 2 MR. TSEYTLIN: Your Honor, we're obviously, 3 given their delay here, we're in a situation that the best thing we have is those texts that we talked 4 5 about from Senator Stewart, and she mentions б Sanderoff. 7 THE COURT: Yeah. MR. TSEYTLIN: So we think intuitively there 8 may be other folks that were discussing (inaudible) 9 10 matter. We're also saying, hey, Sanderoff said this 11 is -- we were going to DPI at -- up to this, or according to Sanderoff, we're going to end up 12 13 capturing three districts in a typical year. That's 14 the kind of thing. 15 THE COURT: Actually, I think that if they're going to talk about Sanderoff, they're going 16 17 to mention what else they're talking about, so I 18 think any other terms would be sufficient. 19 So to avoid bringing in things that are 20 privileged, we'll leave out Sanderoff. 21 So can you do it with the added term 22 DPI? 23 MS. SANCHEZ: Yes, we certainly can. And 24 then what I would ask is to -- I don't know that we 25 need to do this. Well, it would probably be helpful

to do this for the e-mail, as well as the text 1 2 message search, is then to use that list of senators and recipients that I think -- I think we're in 3 4 agreement on who they are. Ms. Ellis-Moore, Mr. Forrester, Ms. Leger Fernandez, Ms. Stansbury, 5 б and Ms. Sandoval. 7 Who is the other person you said THE COURT: there's a question about? 8 9 MR. HARRISON: There were others, your Honor, but -- but again that was one of -- if it --10 11 if they're just going to run the search terms that we 12 just ran, we ask them to run it on everybody and then 13 exclude those communications that are privileged 14 under the Court's ruling. 15 THE COURT: Just everybody? Just all is their e-mails 16 MR. HARRISON: which makes the actual searches simpler, because 17 18 you're just putting in a search term parameters and a 19 time -- you know, within a time frame, as opposed to 20 adding other search parameter. 21 But the reality is, we don't know who --22 I mean, some of these folks -- again, you know, you 23 can work buzz into admissible evidence. And some of 24 these folks we learned about, but there's no reason that the relevance or lack of privilege is limited to 25

just a brief -- you know, a list of folks. 1 The 2 reality is is there could be some, you know, DNC person in D.C. that, your Honor, Peter Wirth Mimi 3 Stewart talked to whose name I don't know. 4 5 THE COURT: Okay. But I thought earlier you б said you were willing to limit it to those names. 7 MR. HARRISON: So that was within the context, your Honor. I don't -- I'm sorry. So what 8 I -- I've got -- like, I believe this is Peter 9 Wirth's subpoena here, and text messages, we asked 10 11 for three categories. We asked for virtually all 12 nonimmediate family member text messages from that 13 four-day period. And secondly, we asked for 14 November 1st to December 7th, which is the 15 pre-legislative period; post CRC pre-legislature 16 period; texts with certain individuals; and -- and then anytime in 2021, texts with a smaller number of 17 18 individuals. Again, we did, like, a belt and 19 20 suspenders type of approach. We would ask if they're 21 running -- if we're talking about e-mail searches, 22 which I assume we are, which that's the most --

23 typically how you run search terms, then we would ask 24 how you produce -- they run the search terms on 25 everybody on obviously withhold those communications

that went exclusively to other members of the 1 2 privilege group, i.e. the legislature. 3 THE COURT: I may be wrong, but wouldn't that increase the time that it will take to get this 4 5 done. If we limited it to those names, I think the б search would go a lot quicker. 7 MR. HARRISON: I think we'd be -- we'd be more apt to agree to limit it to -- in time frame to 8 9 July 1st at the beginning of the CRC process, which 10 would actually probably capture a lot of, like, jilt 11 advocacy of the -- toward the CRC. We'd willing to 12 go to the end of the process, which is like November. 13 Which then now is very narrow. I mean, that -- that 14 is now like a -- well, I won't try to do math on the 15 fly, but from November first to the end of the 16 legislature is, you know, a less than two-month period. 17 18 THE COURT: So they finished their process November 20ed -- November 1st? 19 20 MR. HARRISON: I think the report was issued November 2nd or some -- I don't know. Yeah, it's 21 22 basically November 1st. 23 THE COURT: Okay. All right. 24 Ms. Sanchez. 25 MS. SANCHEZ: So a narrower time frame

definitely helps, your Honor. That should help it go 1 more quickly. Although albeit, there's probably a 2 3 higher volume of communications during that time ramping up to the session. But it still helps to 4 5 have a shorter time period. б I think that we can -- because applying 7 the word searches to e-mail is fairly straightforward, we can probably do that without 8 9 limiting that to the -- to just those --10 THE COURT: All right. 11 MS. SANCHEZ: -- senator recipients. But I think for the text messages, in terms of searching 12 for them, if we can -- if we can limit it to those 13 14 five individuals for the text messages for that 15 period, that's going to allow us to do that much more 16 quickly. I'm not even sure from a technical standpoint how to assist people with that, but we'll 17 18 figure it out. THE COURT: Because you think they're going 19 20 to be just a hand search or scrolling through? 21 MS. SANCHEZ: I mean, we're talking about 22 messages that are going -- I mean, two years -- two 23 years back. I know that there's different 24 capabilities, whether you have an iPhone or an 25 android phone, and I'm not sure what these people

1 have.

5

25

But -- you know, so I just -- I really don't know. I would be guessing if I told the Court what the search capabilities are.

THE COURT: Right.

6 MS. SANCHEZ: But I know that when I look at 7 my text messages, I can see -- I can sort of search be who they're to or from much more quickly that and 8 9 I can find a text from two years ago with a word in 10 it. So that's why I'm suggesting for the text 11 messages, that we use this sender/recipient list. 12 And again, it's the same names that are in the 13 subpoena.

14 I think the individual that Mr. Harrison 15 mentioned that he said was a gray area, I don't think 16 is a gray area at all. It's Dominic Gabello, who was accounting on behalf of the governor. And my 17 18 understanding of the Court's decision letter on 19 privilege is that the governor and her staff are 20 within the scope of the legislative privilege, 21 they're part of the legislative process. Because 22 obviously the governor has to veto or sign off on any 23 legislation ultimately. So I don't think that's a 24 gray area and he shouldn't be included.

THE COURT: What about Mr. -- is it Gabello?

1	
1	MR. HARRISON: It is, your Honor. So he
2	he is the governor's person. Well, so he doesn't
3	have any role at all I think anymore in the formal
4	role.
5	THE COURT: But at the time, what was he
6	doing.
7	MR. HARRISON: But he is another one that
8	again, I actually I've always thought that he was
9	a like a political someone paid by the Lujan
10	Grisham campaign arm. But, again, I'd accept the
11	same type of you know, I mean, they got the thing
12	from Burciaga within, your Honor, 30 minutes. And if
13	somebody if somebody could talk to the state
14	personnel office, or even Holly Agjanian, I could
15	take her representation that he was on the payroll of
16	the government.
17	THE COURT: Okay. All right.
18	Can you do that?
19	MS. SANCHEZ: I can try, your Honor. I know
20	that Mr. Gabello, he was represented by counsel and
21	he filed some motions in this case. I don't have
22	them in front of me. There maybe information in
23	there. But that's certainly my understanding, is
24	that any involvement he would have had occurring that
25	redistricting session would have been on behalf of

the governor. He's very -- he was very much in a 1 2 capacity of an advisor to her. 3 Again, I don't think it matters who 4 signs his paycheck or if he's getting a paycheck. 5 But that was his function and that was his purpose б for being there. 7 And she actually reminded me. MR. HARRISON: He does -- he has Al Park. I got a (inaudible) 8 9 impression from Al Park. But I'll talk to him and 10 I'll accept his representation of what --11 THE COURT: Okay. MR. HARRISON: -- Mr. Gabello's rule. 12 13 THE COURT: All right. 14 MR. HARRISON: But I guess we would 15 reiterate. It sounds like we have an agreement, I think, on the e-mail side, which is the narrow time 16 frame from November 1st to, we say, December 18th 17 18 of -- and then running the search terms that we -- we agreed to for Ms. Sanchez about DPI. 19 20 And on the text side, however, we could 21 do a similar time narrowing. I guess would the 22 legislative defendants be -- think it would be 23 practical to do a similar time narrowing of, you 24 know, November 1st to enactment of legislation, and 25 just, again, do a qualitative all text messages

relating to redistricting that refer in any way to 1 2 the expected or projected partisan composition or 3 likely electoral results of the new districts? The reality, I mean, you're going to 4 5 know, okay, there would have been -- yeah, maybe in б time period you have a thousand texts with your wife, 7 but you don't need to search those. I have --THE COURT: I'm quessing that's probably a 8 thousand text messages back and forth between 9 10 legislators and their staff. And so you want them to 11 search through all of that? MR. HARRISON: All right. And that's where 12 13 I think it actually easier with a text. Because most 14 texts are one-to-one things. So you don't even need 15 to look -- if you're Brian Egolf, you don't need to 16 look at your texts with Leann Leith or with Mimi Stewart or whomever. But the folks outside of the 17 18 privilege group. 19 Again, he likely -- if there's someone 20 at DNC in Washington whose name I don't know, you 21 know, Mr. Egolf would know and would know to go and look at it. 22 Technologically, are you saying 23 THE COURT: like a computer type searching, or are you saying 24 25 someone scrolling through their texts?

1	MR. HARRISON: I'll be talking about the
2	latter, which, again, is more practical and easier
3	when it's a manageable number of things. And as
4	we've narrowed this down both by time and by the fact
5	that now, for example, Mr. Egolf knows he doesn't
6	have to look at Leann Leith, he doesn't have to look
7	at Peter Wirth, et cetera, and also knows as a
8	practical matter, you know, the folks who I would
9	have talked to about this are Ms. So-and-so at the
10	DNC in Washington, and, you know, a prominent
11	demographer out of California that we're asked to run
12	all of I mean, he had reality is he knows. And
13	I guess my hope is that if there's relevant I
14	mean, as a citizen, my hope is that they're not
15	talking to 50 different people about, you know, a
16	gerrymander, they're talking to a relatively small
17	number folks whose opinions they value about this.
18	Now, if that's not the case, if it is,
19	in fact, true that within that time frame Brian Egolf
20	has 1,000 different text messages, you know, with
21	folks outside of to privilege group about
22	redistricting that reference, you know, the partisan
23	or electoral impact of the new districts, then they
24	can come back and we can fashion some search terms
25	for them to use. But I really doubt that's the case

now that we're talking about six people. 1 2 And on that front, I did want to say, 3 Senator Cervantes has been served twice. He was 4 served with a document subpoena, he was served with a deposition subpoena. He went out of town before 5 б trial, but they also, I believe, moved to quash on 7 his behalf, so --THE COURT: All right. 8 MR. HARRISON: -- we would ask that he be 9 10 included in this. 11 THE COURT: Okay. One last thing, 12 Ms. Sanchez. As far as December 18th being the 13 signing of legislation, I think that's probably --14 any comment on that? 15 MS. SANCHEZ: I don't know that that's a big deal, your Honor. I think technically speaking and 16 then looking at the Court's decision, I think the 17 18 Court identified the ends of the legislative process 19 as the passage of the bill. That's the ends of the 20 legislature's work on it. The bill has passed and then, frankly, statements made by legislators of the 21 22 passage of the bill really are kind of immaterial to 23 what we're talking about here. 24 But if the Court wants to go to December 25 17th or 18th or whatever the date is, we can include

1 that. But I think it's --

2 THE COURT: I don't think it'll put too much 3 extra burden on there to go to December 18. So we're looking at November 1st to December 18th, 4 5 communications by e-mail, texting, any other form of б messaging that mention the agreed-upon terms. But 7 not with limiting to these six people named. That's correct, your Honor. 8 MR. HARRISON: MS. SANCHEZ: Your Honor, could I speak to 9 the text message issue just one more time. 10 11 THE COURT: Yeah. 12 MS. SANCHEZ: I'll try to keep this brief, 13 but searching for text messages is qualitatively 14 different than searching e-mails. When I look at my 15 texts, they're not organized by year or by month or 16 by date. They're organized by sender and recipients. And if it's somebody that I'm texting 17 18 with now, today, that I also texted with two years 19 ago, that could be the same text string that I've got 20 to go into and serve back two years ago to identify whether there's anything responsive in that and then 21 22 take screenshots of it, which is laborious, but 23 really the only way to capture text messages. 24 So when we get these after people have 25 searched, in the hospital only are they going to have

to go through manually through their phone and try to find these things, but we're also going to be getting non -- nonelectronic just basically screenshot pictures of text messages to review before production.

б And to try to make this happen in this 7 short of a period of time, if we don't limit the text searches somehow, I don't know how to instruct people 8 to go through their phone through -- through text 9 strings that go back two years ago with different 10 people unless there's a clearer definition of who are 11 12 we looking for texts with. And frankly, these subpoenas already identify the individuals and I 13 14 think we should just use the same names. And if we 15 start expanding this into any text with anybody during this time frame, the search for it is going to 16 be that much more time consuming. 17

And I want to make sure that we're fulfilling the Court's instructions and get the most we can as quick as we can.

21 MR. TSEYTLIN: Your Honor, almost everyone 22 uses either iPhones or androids. I just searched --23 you know, I'm a Detroit Lions fan. They're playing 24 today and they're going to win. I just searched 25 Lions on my iPhone in the texting. Every text I sent

1 about the Lions popped up. You press on it, it's 2 right on the screen. It's easy as pie. I don't have 3 an android, but I just did it a search. Apparently, android works the same way. If someone has got some 4 5 windows phone or some old flippy Nokia thing, maybe б that will be more challenging. But it seems to me 7 that this is eminently doable and quite easy, especially when you're just having those search 8 9 terms. You just put -- put DPI, it'll just pop right 10 up and all the text messages that you sends. Works 11 very easy. THE COURT: All right. I don't -- I don't 12

13 know how to search for -- I've never once searched 14 through my text messages, so -- I mean, do you know 15 if that's something that your people can do? I 16 mean...

MS. SANCHEZ: I don't. I truly don't know if it's something I can do. And that's why I want to make this as doable. I don't have a basis to disagree with counsel's representations, but I have no experience with doing word searches on text messages, particularly -- and I have no idea how android phones work.

24THE COURT: So they would have to search it,25then go through and look at -- I mean, I mean

quessing a legislator speaks to -- you said you think 1 2 it's a small group of people, I think it's a large group of people, about these things, that are going 3 to be other legislators or legislative staff. I 4 5 think that's going to be 90 percent of what is б brought up when you run a search for those things. 7 MR. TSEYTLIN: I mean, look, I can just -- I know it's unusual, but I can show your Honor and 8 9 counsel on an iPhone how easy it is. 10 Okay. But -- I'm going to take THE COURT: 11 your word for it, that it's easy. But then they'll 12 have to go through each one of those and decide which 13 once are protected by privilege, which ones aren't. 14 MR. TSEYTLIN: So --15 MR. HARRISON: So here's what I would expect, if it were me and who I imagine I would talk 16 to. I agree that I would talk to a large number of 17 18 my colleagues and staff in the legislature. So you take out an iPhone. Obviously it's got your -- the 19 20 names of who you texted. You don't even go to those 21 folks. 22 THE COURT: Well, that's you searching just 23 all of your text messages? 24 MR. TSEYTLIN: Yes. So there's a search bar 25 on top, your Honor. You type in DPI.

1 THE COURT: Right. 2 It will pop up literally and MR. TSEYTLIN: 3 it will say, like --4 THE COURT: Every text you ever sent with 5 that. б MR. TSEYTLIN: -- Jane Smith, blah, blah, 7 blah, and so obviously you know the ones that are legislators, you just take those out. And then 8 9 you've got someone at the -- you know, at the CCP. 10 Oh, they're not a staffer, so you click on that, 11 screenshot, the screenshot, those two buttons on the front, screenshot, turn it over to counsel. 12 It would take someone who knows what 13 14 they're doing 10 minutes. Someone that doesn't know 15 what they're doing, maybe an hour. 16 MR. HARRISON: And there's an alternative, which is if we just give them a topic, which is the 17 18 traditional way to propound RFPs and subpoenas to get 19 what you're going to propose that are about 20 redistricting and mention partisanship or likely 21 electoral results. 22 THE COURT: Mm-hmm. 23 MR. HARRISON: Okay. I'm bringing it up. 24 Okay. I talked to a ton of people, they're mostly 25 legislators and my staff. I did talk to these four

people. Okay. I scroll down to those four people's 1 2 names, I scroll up to the time period, which is a manageable time period, and I go through and okay, 3 yeah, for these people, within that month and a half, 4 okay, I've got, you know, 40 texts and 46 of them do 5 б relate to --7 THE COURT: Okay. So let me ask you about that. You're -- because I was thinking the same 8 thing, that most of these people will probably know 9 who they talked to outside of the privileged people. 10 11 MR. HARRISON: Correct. 12 THE COURT: So why don't we just ask them, 13 basically, on their honor, you know, to identify 14 those and just get those instead of running it 15 through everything? I mean, that's, I think, a lot easier than running these search terms that just look 16 for people they know are outside the privilege. 17 18 MR. HARRISON: And I -- for text messages, I 19 personally agree. I think that makes sense. 20 Because, again, you're effectively going to your list of names and --21 22 THE COURT: Okay. 23 MR. HARRISON: -- going to what I have to 24 imagine is a short /TPUB of folks who recollects are 25 not legislators or staff, and who you know you would

have talked to about -- candidly, about the partisan
 equity of redistricting.

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THE COURT: Right.

MR. HARRISON: And I've got to think that even for the important legislators, it's a single digit number of folks, you scope up to that time periods, you give us the stuff within that time period.

9 THE COURT: I tend to agree with that. Ι 10 think that the -- for text messaging, you can 11 instruct them to -- I mean, you explain to them who 12 the privilege -- I think that they can grasp that the 13 privilege is legislators, legislative staff, 14 consultants who are in a formal relationship with a 15 legislature, people who are in legislative agencies, 16 like the CRC, things of that nature. You can -- they will understand that. And I think that they will 17 18 probably know who they spoke outside of is that group 19 and then be responsive to that.

20

MS. SANCHEZ: Within that time frame.

THE COURT: Within the time frame of November 1st to December 18th of 2021. And that's for text messages. I think the search would be easier for the e-mails.

25

MR. TSEYTLIN: Just to clarify, including

personal e-mails, your Honor. 1 2 THE COURT: Any e-mails sent, not just 3 government account. MS. SANCHEZ: Yeah, I have concerns about 4 5 that happening in the short time frame that we've б got. 7 THE COURT: Yeah. MS. SANCHEZ: But we will --8 THE COURT: No, I understand. What I'd ask 9 10 you to do is whoever you're going to have working on 11 this, next time we take a break or just get a report from them about when they think that realistically, 12 13 with their best efforts, they can get this done. And 14 let me know. Okay. 15 MS. SANCHEZ: I will do that, your Honor. One quick clarification. Plaintiffs' counsel keeps 16 17 referencing to the term redistricting. Obviously 18 during that session and the lead-up to it, there was a lot of discussion about house redistricting, senate 19 20 redistricting PRC redistricting, all that. Ι 21 think --22 THE COURT: I think the --23 MS. SANCHEZ: And I assume we're focusing on 24 congressional redistricting. 25 THE COURT: Right. In SB-1, and I thought

that that was a good thing to look at, you know, for 1 2 a search terms, and all the iterations, you came up 3 with. MS. SANCHEZ: Okay. Thank you. 4 5 MR. HARRISON: And we would agree for texts, б if they can look at and determine that the texts is 7 about exclusively house or senate redistricting, they don't have to produce it. 8 9 THE COURT: Right, right. 10 MR. HARRISON: But we don't think it has to 11 "Congress." It's clear they're talking about 12 three -- you know. 13 THE COURT: Rights. 14 MR. HARRISON: And if they're talking about 15 Congress, if they're talking about something, one of 16 the other ones, exclusively, then they can withhold it. 17 18 MS. SANCHEZ: Thank you, your Honor. 19 THE COURT: Okay? All right. Anything else 20 before we bring Mr. Trende back? 21 MR. HARRISON: Not from the plaintiffs, your 22 Honor. 23 THE COURT: Mr. Trende, do you want to come 24 up here. 25 UNIDENTIFIED MALE: Your Honor, we've been

going now for almost two and a half hours. I'm going 1 2 to need to set up some technology here. And can we 3 take a break? 4 THE COURT: Sure. All right. We'll take 10 minutes and then we'll start with Mr. Trende. 5 (Recess held from 9:38 a.m. б 7 to 9:52 a.m.) THE COURT: Back on the record. 8 Mr. Trende, you are still under oath. 9 10 And Mr. Williams. MR. WILLIAMS: Yes, your Honor. Thank you 11 12 very much. 13 CROSS-EXAMINATION 14 BY MR. WILLIAMS: 15 Q. Dr. Trende, you've testified under oath, Mr. Trende -- let's just say we'll call you 16 Dr. Trende, you've passed the tough hurdle. 17 18 A. Probably the nicest thing you're going to 19 say to me for the next two hours or so. 20 Q. No, no. We're going to be friends at the 21 end of this. 22 Dr. Trende, you've testified under oath four times in this litigation via your verified 23 24 report, via your first deposition, via your second 25 deposition, and now in trial; is that right?

1	A. Yes.
2	Q. All right. And you were you testified
3	yesterday that you are a trained lawyer; is that
4	right?
5	A. Yes.
6	Q. And you understand the import or verifying a
7	report for truthfulness, correct?
8	A. Right.
9	Q. And you understand the import of taking the
10	oath during a deposition or at trial to tell the
11	truth, correct?
12	A. Correct.
13	Q. All right.
14	MR. WILLIAMS: Your Honor, I'm going to try
15	and to minimize my requests of you to change inputs
16	on your computer there. So I'm going to start by
17	using the ELMO right here. It's already set up to do
18	documents. But at some point, I pay need you to give
19	me permission to change to a laptop. You don't have
20	to do negative right this second.
21	THE COURT: All right.
22	MR. WILLIAMS: All right. Thank you, your
23	Honor.
24	BY MR. WILLIAMS:
25	Q. Mr. Trende, do you recall this exhibit that

plaintiffs put forward yesterday? 1 2 Α. Yes. All right. Did you create that exhibit? 3 Ο. 4 Α. Yes. 5 All right. And what does that exhibit Ο. 6 purport to show? 7 From Dr. Chen's you computer, from Α. 8 Dr. Chen's shapefiles, the number of active oil wells 9 in each county. 10 Q. All right. And when you say Dr. Chen's 11 shapefiles, do you know if he generated those 12 shapefiles? 13 Α. No. 14 All right. Would you believe me if I told 0. 15 you that shapefile came from the New Mexico oil 16 conservation division? 17 Α. Yes. What do you know about 18 Okay. All right. 0. 19 Colfax and Harding counties, Mr. Trende? 20 Α. Nothing. 21 All right. Do you know if there's any oil Ο. 22 and gas production in Colfax or Harding County? 23 Α. No. 24 Q. All right. Would it surprise you to know, 25 Mr. Trende, that there are no, no active oil and gas

1	wells or excuse me, there are no active oil wells
2	in Colfax or Harding County?
3	A. I wouldn't know one way or the other.
4	Q. Well, did you look in the shapefile to
5	determine whether you pulled your data off of a
6	column that was total number of wells as opposed to
7	separate columns that enumerated wells in each county
8	for oil, for example, or gas, for example, or CO_2 , for
9	example, or produced water wells, for example, or
10	carbon sequestration wells, or brine wells?
11	A. I believe it was pulled off the oil column.
12	Q. All right. So your testimony is that that
13	represents oil wells in New Mexico?
14	A. I believe the way it was filtered was oil
15	and then active.
16	Q. If Dr. Chen testifies that he knows what you
17	did and you made a mistake, are you going to disagree
18	with him?
19	A. It would depend.
20	Q. Okay. All right. Well we'll keep that in
21	our pockets for Dr. Chen.
22	You recall in your verified report that
23	you wrote that on Page 47, that you performed
24	50,000 simulations; is that right?
25	A. Yes.

on you a mistake? it was ort you had your verified testified that
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1	Q. And 1 percent of the New Mexico
2	congressional district is approximately 7,058 people;
3	is that right?
4	A. That sounds right.
5	Q. All right. And congressional districting,
6	as I appreciate it, requires virtually equal
7	populations, correct?
8	A. That's right.
9	Q. And so your plus or minus 1 percent
10	population deviation is well in excess of equal
11	populations?
12	A. That's right.
13	Q. By about 7,500 7,058 people, right?
14	A. I'll accept that representation.
15	Q. And I believe you testified that
16	notwithstanding that differentiation, that's just how
17	it's done in simulations in the industry; is that
18	correct?
19	A. That's how it's typically done, that's
20	right.
21	Q. And these the way you do it; is that right?
22	A. Correct.
23	Q. All right. Were you an expert in a case
24	styled Szeliga versus Lamone?
25	A. That's right.

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1	Q. And did you review a memorandum opinion and
2	order from Szeliga versus Lamone?
3	A. That's right.
4	Q. All right. You didn't use a plus or minus
5	1 percent population deviation in that engagement, did
6	you?
7	A. No. I think for that one, I did two-tenths
8	of a percent, maybe.
9	Q. Would you believe me if I today you it was
10	one-tenth of a percent?
11	A. I believe you.
12	Q. All right. So that is different than what
13	you did in this case; is that right?
14	A. It's a different percentage, but it's still
15	more than what the allowable population tolerance is
16	for one person, one vote. It's the same what's the
17	same is the concept that you get close enough to the
18	political distribution that fixing the districts to be
19	equipopulous wouldn't change their partisanship very
20	much.
21	Q. How do you pick between using one-tenth of a
22	percent and plus or minus 1 percent for a particular
23	engagement?
24	A. I started with 1 percent here. It is
25	typical threshold that's been used. Sometimes it's

been more. Sometimes it's been less. I suppose if
someone wanted to see if it was sensitive to that,
they could test it by running with a smaller
population threshold.
Q. Well, we'll get to testing your opinions in
a minute, Mr. Trende.
I believe, Mr. Trende, that you have
testified that your simulations that formed the basis
of your August 11th, 2023, opinion had a 50 percent
duplication rate; is that right?
A. Roughly, yes.
Q. Roughly? And you presented some charts to
the court, some dot plots in particular, that you
represented to the Court each contained 3 million
distinct dots. Do you recall that?
A. I don't think I said distinct. That's the
problem you would because they don't show up as
distinct at that number, that's why I also included
box plots.
Q. At a 50 percent duplication rate, there
could be at most, under an ideal circumstance,
approximately 1.5 million distinct dots. Would that
be true?
A. At most, yes.
Q. Yeah. So there couldn't have been 3 million

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as you represented, right?

A. Well, of course, there's 3 million, it'sjust two of them are placed on top of each other.

4 Q. Okay. Why didn't you discard your 5 duplicates?

б A. Because that doesn't give you the true 7 distribution. Let's say you wanted to know the distribution of the height of American males. You do 8 9 a poll and you get your sample and it ranges from 5'3" 10 to 6'7". If you discarded all the duplicate heights, 11 you would look at it and say 5'3" is the typical 12 height because it's within the range. You need to 13 know where the distribution peaks in order to make 14 that type of representation.

You would completely mess it up if you did he duplicated. Something I've learned along the way.

Q. And you've testified that you use the Redist SMC algorithm based in large part upon Kosuke Imai's SMC paper; is that right?

21

A. Correct.

Q. All right. And you have, I guess, recently learned that Dr. Imai has some concerns about sample diversity. Do you recall that testimony?

25

A. That's right, yeah.

And Dr. Imai's concern is that with a large 1 Ο. 2 number of duplicates and a lack of sample diversity, 3 there could be difficulties in interpreting results of the simulations; is that right? 4 5 That's my understanding, yes. Α. Now, in that same case, the Szeliga case, at б 0. 7 Paragraph 99, the trial court noted that you performed 8 250,000 simulations and you discarded your duplicative 9 maps and arrived at between 30,000 to 90,000 maps. Do 10 you see that? 11 I discarded the duplicative maps and the Α. maps that weren't consistent with the VRA. 12 That's right. 13 14 Well, it doesn't say VRA there, does it? Q. It doesn't in the order, but it did in my 15 Α. 16 report. The order says that you discarded 17 Ο. 18 duplicates, and that's not something you did in this 19 case, correct? 20 Α. That's right. Like I said, I've learned 21 along the way that you shouldn't discard the duplicate 22 maps. 23 Q. I believe one of the things you testified 24 yesterday that will sequential Monte Carlo 25 algorithm -- or excuse me, the Sequential Monte Carlo

paper that I presented to you about the sample 1 2 diversity issues -- I'm going to show you what was the 3 Exhibit B we talked about yesterday, that you had read a version of this paper, but you had not read this 4 5 version 5 that was residentially -- this 5th version б of a working draft paper that Dr. Imai has published. 7 Do you see that? That's right. 8 Α. All right. When is the last time you read 9 Ο. 10 one of Dr. Imai's Sequential Monte Carlo algorithm 11 papers? 12 I think what I -- if I didn't testify to Α. this, then I misspoke, but I didn't read that at the 13 14 time of my report. I read it subsequently. 15 Q. Okay. Had you read any earlier versions of 16 Dr. Imai's Sequential Monte Carlo paper before you 17 drafted your report? 18 Yes. Α. Had you, for example, read the fourth 19 Q. 20 version of Dr. Imai's paper? I don't believe so. 21 Α. 22 All right. Well, that paper was drafted on Ο. 23 June 14th of 2022. That's well before you performed 24 your expert services in this case; is that right? 25 Α. That's right.

Q. And on Page 11 of Dr. Imai's fourth draft, 1 2 he has the same concerns there that he does in his 3 fifth draft. Do you agree with that? 4 Α. Yes. 5 All right. So --Q. 6 MS. DIRAGO: Can we get a copy of that? 7 MR. WILLIAMS: Sure. Thank you very much. 8 MS. DIRAGO: 9 BY MR. WILLIAMS: 10 Q. So for quite awhile Dr. Imai has been aware 11 of the problem of sample diversity, and he has 12 recommended for a long while that diagnostics be performed on the data that is generated, and that's 13 14 something I don't do in this case; is that right? 15 Α. That's right. 16 All right. So we don't know, and there's no Ο. way for us to know, that for the 2,040,000 maps that 17 18 form the basis of your expert report, there's no way 19 for us to run any diagnosis -- excuse me --20 diagnostics against those maps; is that correct? 21 Not directly on those maps, but you could Α. 22 run the simulation and see what it said. 23 Q. So, again, my question is, there's no way 24 for us to run diagnostics on those maps; is that 25 right?

A. The way you particularly phrase the
question, that's true.
Q. Dr. Kosuke Imai's Sequential Monte Carlo's
paper has not been published formally, has it?
A. It's forthcoming, but no, it hasn't been
formally published.
Q. So it's a working draft, correct?
A. It's been accepted at the annals of applied
statistics. So I don't think it's working anymore.
Q. Would you agree that it was a working draft
between versions 1, 2, 3, 4 and 5?
A. Yes.
Q. And when you generated your report in this
case, was it a final draft?
A. I don't know.
MS. DIRAGO: Objection, vague. I don't know
what's a final draft of what, the report or the
article.
THE COURT: He answered it.
MR. WILLIAMS: Yeah.
BY MR. WILLIAMS:
Q. So while it's a working draft, Mr. Trende,
do you think it's important to keep track of the most
current versions of his SMC article so that you can be
aware of his opinions regarding that article?

Γ

1	A. It could be.
2	Q. Would it have been useful to you to have a
3	read the fourth and fifth versions of Dr. Imai's
4	article before you performed your services in this
5	case?
6	A. It could have been.
7	Q. But you don't know?
8	A. But I don't know.
9	Q. And we can't know because we can't test the
10	data, correct?
11	A. You can't test the exact maps that were
12	produced to first time around.
13	Q. One of the things we've talked about over
14	the past couple of times, Mr. Trende, is that you've
15	told us that, well, you could reproduce a reasonable
16	facsimile of the 2,040,000 maps with the source cold
17	that you produced; is that right?
18	A. That's right.
19	Q. Now, do you recall when I took your
20	deposition the first time, that when we reviewed the
21	source code that you produced, it wouldn't generate
22	2,040,000 maps? Do you recall that?
23	A. As it stood at the time of my deposition,
24	that's right.
25	Q. And at the time of your deposition was after

your report had been filed, correct? 1 2 Α. Correct. And the code that you produced to us would 3 Ο. have generated 240,000 simulations; is that right? 4 5 Α. That's right. And that's far less than the 2,040,000 that 6 Ο. 7 are reflected in your report? That's right. 8 Α. 9 After your deposition, you changed your code Q. and produced it to us so that that changed version of 10 11 your code would produce 2,040,000 simulations, 12 correct? I changed it to it would be as it was 13 Α. Yeah. 14 when I ran the code. 15 Q. All right. Do you recall testifying that 16 the version of the code you produced was some earlier 17 version, not the one that you used to generate your 18 opinions? 19 Α. No. 20 MR. WILLIAMS: May I approach, your Honor? 21 BY MR. WILLIAMS: 22 If you turn to Page 38 of your deposition, Ο. Mr. Trende, I think we printed it on both sides to 23 24 limit the number of trees that would have to die for 25 this litigation, at Lines 6 through ten, you stated:

It probably would have been an earlier version of the 1 2 code, and then, when I produced it, I took the hash 3 tags out to it would create titles for you to reference the titles in the report. 4 5 Do you see that? 6 Α. Yes. 7 And we did not get that earlier version of Ο. the code, did we? 8 9 Right. The code that I ran was earlier, and Α. then I changed some things. That one, I changed so 10 11 that it would actually print titles for you, which I 12 thought would be useful in interpreting the maps. Q. Well, let's talk about those titles. 13 Ι 14 believe you testified that the histograms charts and 15 figures in your expert report are some collateral 16 indicia that you actually did do 2,040,000 simulations. Do you recall that testimony? 17 18 Yes. Α. And you base that, I think, on the 19 Q. 20 histograms, suggesting that if we were to stack up all 21 the bars on the histograms, it would add up to 22 approximately 2 million? 23 Α. That's right. 24 Q. All right. In all of your report, the 25 charts and figures within Section 6.4 have the word

1	simulated in them; is that right?
2	A. I think it's oh, in the report, yeah,
3	that's right.
4	Q. But in your code that generated those charts
5	and figures, it doesn't have the word simulated, it
6	has the word simultated, s-i-m-u-l-t-a-t-e-d; is that
7	right?
8	A. That's right.
9	Q. And that's different?
10	A. No, that's right.
11	Q. Yep. And that's not what we have in the
12	report, correct?
13	A. No. Like I explained in any deposition, the
14	function that creates the plot, when I ran the code
15	for the report, didn't print the report titles. For
16	you all, since I thought you'd want to try to run the
17	code and replicate, I made it so that it would print
18	the titles, so that you could match it with what is in
19	the report, instead of getting a bunch of blank maps.
20	Q. Well, let's talk about what you thought we
21	would want to do by running the code and replicate.
22	In your deposition, when I was asking
23	you questions about the lack of the 2,040,000
24	simulations, you twice testified that you had
25	anticipated that we would want to see those maps so

you had configured your code so that it could create 1 2 exact reproductions. Do you recall that testimony? 3 Yes. Α. All right. And when you testified, we 4 0. weren't hearing about, well, you don't need to see the 5 simulations, you can just run it again and get the б 7 distribution. You said specifically, you anticipated that we would want to see those names, didn't you? 8 9 You know, I think I'd like to see the exact Α. 10 quote on that. 11 Sure. Why don't you turn to Page 23 of your Ο. 12 deposition. Look at Lines 1 through 3. 13 Α. Yes. 14 Q. All right. You don't dispute that you said that: But because the code is created with the seed 15 16 set in it, it should be replicable be plaintiffs' experts or defendants' experts. That was your 17 18 testimony, right? A. Oh, yeah. And I'm glad I asked about this, 19 20 because that's different than saying: I thought you 21 would want to look at the maps. 22 O. Okay. Then let's look at Page 48 23 (inaudible)? 24 Α. Actually, it's --25 Ο. That may be one of (inaudible).

At Line 6 through 10, you said: Well, 1 2 because presumably your expert will want to see and 3 reproduce the maps that were created, and noticing that (inaudible) is 100,000, would realize that to 4 5 replicate that would be set to a million and would do б so, perhaps. 7 Do you see that? I do see that. 8 Α. And so you acknowledged then that we would 9 Ο. want to see your maps? 10 11 A. Correct. But we can't do that, can we? 12 Q. 13 A. You can't. You can see the distribution 14 that's created. 15 Q. And that distribution, we can't check your 16 distribution because we don't have the maps? No. You can run the code again and see if 17 Α. the distribution looks the same. 18 I can check a different distribution, that's 19 Q. 20 correct? 21 Because the distributions are printed Α. No. 22 in the report, you can check it against what's printed 23 in the report. 24 Q. I recall you testifying yesterday, Dr. --Mr. Trende, that you had reviewed all thousand of the 25

1	maps that Dr. Chen generated do you recall that?
2	A. Yes.
3	Q. And that was something you were able to do
4	so that you could offer testimony in this case because
5	we produced the work that Dr. Chen had saved to you;
6	is that right?
7	A. Right.
8	Q. And that is something that we have not been
9	able to do because you did not save your maps.
10	Although you have them, you created them, you say you
11	analyzed them, you say you generated charts and
12	figures, and then they went away; is that right?
13	A. Right. You got a second run of them that
14	you could use to check the maps, but
15	Q. We would get a different run of a different
16	set of maps; is that correct?
17	A. You would get a different run of the maps.
18	I don't know how different they would be overall.
19	Q. You'd agree they wouldn't be the same?
20	A. They wouldn't be identical, that's right.
21	Q. Mr. Trende, I believe you have testified
22	that this is an egregious partisan gerrymander in
23	SB-1; is that right?
24	A. Yes.
25	Q. All right. The margin of victory for

Congressman Vasquez over Congresswoman Harrell was 1 2 1,350 votes; is that right? 3 Α. That's right. Do you know a Senator Gallegos? 4 0. 5 No. Α. Do you know -- I guess no one has told you 6 Ο. 7 about Senator Gallegos and his testimony in this case? No. 8 Α. 9 I'll represent to you that Senator Gallegos Ο. 10 is a state senator I believe in the Eunice area. And 11 he offered testimony yesterday regarding the current 12 climate for Republican voters in CD-2. Would it surprise you to know that 13 14 Senator Gallegos thought that the Republicans could win CD-2 if they would increase voter turnout? 15 16 I suppose that's literally true, but yes, it Α. would surprise me. 17 Q. Are you aware of recent polling regarding 18 19 CD-2 and the race between Congressman Vasquez and 20 Congresswoman Harrell? 21 Α. No. MR. WILLIAMS: Your Honor, may I approach 22 23 the witness? 24 THE COURT: Yes. 25 MS. DIRAGO: So what is this?

BY MR. WILLIAMS: 1 2 Q. Dr. Trende, this is a news story from 3 KOB-TV. Do you see that? 4 MS. DIRAGO: So I'm going to object on 5 relevance, on hearsay. б MR. WILLIAMS: Your Honor, experts can rely 7 upon hearsay. Relevance will become apparent. MS. DIRAGO: He didn't rely upon this, and 8 it doesn't mean it admissible in court. He can rely 9 10 upon it if he wishes, it's not admissible in court. 11 MR. WILLIAMS: I haven't moved to at mitt --12 MS. DIRAGO: I'm sorry. 13 MR. WILLIAMS: I haven't used to admit it, 14 your Honor. I'm using this to challenge the opinions of Mr. Trende. 15 16 MS. DIRAGO: It's hearsay. MR. WILLIAMS: Hearsay is admissible -- or 17 18 is usable by expert witnesses. 19 MS. DIRAGO: No, it's not. 20 THE COURT: (Inaudible) reports. 21 MR. WILLIAMS: Excuse me? 22 THE COURT: (Inaudible) the reports. 23 MR. WILLIAMS: And in rendering opinions. 24 MS. DIRAGO: But he didn't use it. It 25 doesn't mean it comes in at trial.

THE COURT: You're asking him to render his 1 2 opinion now? 3 MR. WILLIAMS: I just want to find out if this will inform and change his opinion, your Honor. 4 MS. DIRAGO: But we don't know what it is. 5 б We can't test -- I mean, this is a random piece of 7 paper with a poll. MR. WILLIAMS: Oh. 8 9 MS. DIRAGO: Right, we don't know who did 10 this, we don't know what they were using to create a poll. It's irrelevant and there's know 11 authentication and it's hearsay. I cannot 12 13 cross-examine the person who did this poll. 14 MR. WILLIAMS: Your Honor, if we're going to 15 start excluding evidence for not being testable, I'm 16 fine with that. MS. DIRAGO: I am, too, in fact. 17 18 MR. WILLIAMS: Your Honor, I'd like to move 19 to exclude Mr. Trende's report. 20 THE COURT: No, we're not going to do that. So as far as this, your wanting to question him about 21 22 a report. Lay your foundation for how this poll was 23 done. 24 25

1	BY MR. WILLIAMS:
2	Q. Mr. Trende, do you see in this article, a
3	reference to a poll that was performed?
4	A. Yes.
5	Q. All right. And are you familiar with survey
6	USA?
7	A. Yes.
8	Q. All right. Is that a reputable polling
9	organization?
10	A. Yes.
11	Q. All right. Do you have any reason to
12	disagree with the story that says that the current
13	congressional race between Congresswoman Harrell and
14	Congressman Vasquez is a neck and in the case race?
15	A. I don't have any reason to dispute that
16	that's what the article says.
17	Q. All right. The fact that there is polling
18	that suggestions the race is in the case and in the
19	case, does that in any way change your opinion about
20	entrenchment or extreme partisan gerrymander?
21	A. No. Because it also says that only 32
22	percent of the respondents has unfavorable I'm
23	sorry. Only 28 percent of respondents had an
24	unfavorable impression of Vasquez compared to 32 of
25	Harrell. And generally, incumbent with 28 percent

unfavorables don't lose. Those undecideds are going 1 2 to be voters who don't have unfavorable opinions of 3 the Congressman, are going to tend to break his way. So you don't necessarily disagree with the 4 Ο. poll, you just think it could be a more thorough? 5 No, you asked me if I changed my opinion. б Α. 7 It doesn't change my opinion, because those undecideds 8 are people who don't have unfavorable opinions of the 9 Congressman and are unlikely to throw him out. 10 All right. Thank you, Mr. Trende? Q. 11 MR. WILLIAMS: Your Honor, may I approach? 12 THE COURT: Okay. BY MR. WILLIAMS: 13 14 Q. Mr. Chairman Trende, are you familiar with the -- what the New Mexico Legislature is? 15 16 Α. Yes. All right. And are you aware that it has a 17 Ο. legislative financial committee? 18 19 Α. I am now. 20 Q. Okay. What I've handed you'd is a letter 21 from Senator George Munoz of the legislative finance 22 committee. Do you see that? 23 Α. Yes. 24 Q. And in that letter, he talks about the 25 general fund. Do you see that?

1	A. Yes.
2	Q. And I believe he talks about \$9.57 billion
3	in the general in the recurring general funds. Do
4	you see that?
5	A. Yes.
6	Q. All right. In the attached document, which
7	is it is fiscal review and outlook from the
8	legislative financial committee, do you see a chart in
9	the left-hand side of the page?
10	A. Yes.
11	Q. And in that chart, it reflects that gross
12	receipts taxes from Eddy and Lea, as well as out of
13	state, are up to about 40 percent of our general
14	revenue; is that right?
15	A. That's right.
16	Q. All right. Would it be fair to say,
17	Mr. Trende, that based upon those numbers, all of
18	New Mexico has a pretty significant interest in oil
19	and gas production?
20	MS. DIRAGO: Objection. Foundation.
21	A. Yeah, I don't
22	THE COURT: Mr. Trende.
23	THE WITNESS: I'm sorry.
24	THE COURT: The objection?
25	MR. WILLIAMS: The objection is foundation.

We've established this is a letter from the 1 2 legislative financial committee. This is a public 3 record generated in the ordinary course of business. It's sort of evidence that an expert can consider 4 5 (inaudible). б THE COURT: You're asking his opinion 7 about --I'm asking whether that 40 8 MR. WILLIAMS: 9 percent number demonstrates essentially that there is 10 a larger community of it based upon oil and gas 11 production in Lea and Eddy County for the entire 12 State of New Mexico. 13 MS. DIRAGO: That was not the question. The 14 question was whether New Mexico cares about -- has a 15 vested interest in Lea and Eddy County. 16 MR. WILLIAMS: In oil and gas production from Lea and Eddy County. 17 18 MS. DIRAGO: Okay. I mean, that's not a --19 no, you didn't ask that. 20 THE COURT: So your question was, would you agree that the -- all of New Mexico has an I object 21 in oil and gas in Eddy and Lea County? 22 23 MR. WILLIAMS: That sounds like a better question than what I probably asked, but yes. 24 25 MS. DIRAGO: That's a better question but

1	I'm still objecting. How would he know? He's not an
2	expert in what New Mexico cares about.
3	THE COURT: I'll let him answer to whatever
4	extent he thinks he knows the answer.
5	A. Yeah, I'm really not an expert on the
6	New Mexico budget, and don't feel comfort in having
7	skimmed a few paragraphs in this in trial transcript
8	that going to follow me the rest of my life giving
9	that opinion.
10	Q. Hypothetically.
11	A. Hypothetically.
12	Q. Hypothetically then, Mr. Trende, would you
13	agree with me that it's fairly significant to any
14	state to have a state has an interest in where 40
15	percent of its revenue comes from?
16	MS. DIRAGO: Same objection.
17	THE COURT: I'll let him answer it, again,
18	to the state that he has an opinion.
19	A. Yeah, I don't have an opinion on how on
20	New Mexico's budget on how it allocates funds or what
21	this chart means. In the tax and revenue stuff,
22	there's always important nuances and I just don't feel
23	comfortable getting into that.
24	Q. How would you feel if 40 percent of your
25	revenue went away, Mr. Trende?

1	MS. DIRAGO: Objection.
2	THE COURT: Yeah, I'm going to sustain that
3	objection.
4	MR. WILLIAMS: All right.
5	BY MR. WILLIAMS:
6	Q. Mr. Trende if I am correct in what I've
7	heard in your testimony today, your expert report had
8	at least two errors in it that related to the machine
9	that you performed your simulations on and the /TPUB
10	of simulations performed; is that right?
11	A. That's right.
12	Q. Okay. And if I understand the testimony
13	that you've given over the past couple of days and in
14	your deposition, your initial testimony was that your
15	code preserved the 2,040,000 simulations by virtue of
16	a set seed a; is that right?
17	A. That's right.
18	Q. And it didn't do that, correct?
19	A. That's correct.
20	Q. I believe at your second deposition you
21	testified that or excuse me, at your first
22	deposition, you had testified that Dr. Chen's 1,000
23	maps had duplicates in them. Do you recall giving
24	that testimony?
25	A. I do.

1	Q. And do you recall then correcting your
2	testimony?
3	A. Yes.
4	Q. All right. So then I believe you testified
5	that excuse me that we could check whether you
6	actually did the work against the charts and figures
7	in your report that is spelled differently than would
8	have been generated by the codes you produced to us,
9	is that correct, simulated versus simultated; is that
10	right?
11	A. The titles are different. But I don't think
12	there's any dispute that the charts are the same.
13	Q. How would I know that, Mr. Trende? I don't
14	have the data?
15	A. I don't think you've accused me of changing
16	the contents of the chart.
17	Q. Well, Mr. Trende, would you agree with me
18	that the charts are the product of your analysis of
19	the data?
20	A. Yes.
21	Q. And you'd agree with me that we don't have
22	the data; is that right?
23	A. The original data, no.
24	Q. All right. Which is the data, correct?
25	A. I don't think so.

1	0 Did you analyze any other data for your
1 2	Q. Did you analyze any other data for your
	report?
3	A. For the declaration, yes. I'm not going
4	to
5	Q. I'm not asking you about your declaration,
6	Mr. Trende. My question was, did you analyze any
7	other data for your report?
8	A. Okay. So that's a different question than
9	you asked. No, for the initial report, I didn't
10	analyze any other data.
11	Q. That was the report on was due on August
12	11th, 2023, correct?
13	A. Yes.
14	MR. WILLIAMS: Your Honor, I know the Court
15	has ruled, but based upon Mr. Trende's testimony,
16	they cannot lay an evidentiary foundation for the
17	charts and figures or for the opinions in 6.41 or
18	6.42. There's no way anyone can test that data.
19	Mr. Trende has relied on the exact form of data to
20	criticize Dr. Chen that we have been deprived of in
21	this case, the maps.
22	Mr. Trende has testified that he knew we
23	would want to see the maps, and today we don't have
24	them and we will never have them.
25	The rules of evidence are very clear.

They have to set up an evidentiary foundation that is 1 2 testable. The rules of evidence contemplate the 3 production of the underlying data and we don't have it. 4 5 I don't want to go to war with your б Honor's ruling, but I urge you, that now that we've 7 got the benefit of Mr. Trende's testimony, that there is a full already record and that the Court could 8 9 revisit its ruling. 10 Thank you. I'll pass the witness. 11 MS. DIRAGO: I don't know if I need to 12 object on the record to that. 13 MR. WILLIAMS: Oh, your Honor, I --14 MS. DIRAGO: If that was a motion or what, 15 but --16 MR. WILLIAMS: I do have one other housekeeping. 17 18 THE COURT: Okay. Was that a motion? 19 MR. WILLIAMS: It was a motion. But before 20 we get to that, can I do my housekeeping? 21 THE COURT: Okay. Your Honor, I would move the 22 MR. WILLIAMS: 23 admission of -- I'm in the wrong examination. I'm 24 very tired, your Honor. 25 THE COURT: Okay.

MR. WILLIAMS: All right. I am done. 1 And 2 yes, we can do that motion right now. 3 THE COURT: All right. I object to the motion maybe 4 MS. DIRAGO: 5 the third or fourth time on the same basis that I б objected before, that Mr. Trende's results are reproducible, they are testable. It's just -- this 7 is oversimplifying it a lot, but it's just like if I 8 9 gave you a recipe and I said, "This makes a chocolate 10 cake. You can do it yourself and see if it does 11 indeed make a chocolate cake and not a buttermilk 12 cake and not brownies." And if that's something that Dr. Chen 13 14 wants to do, come in and say, "This recipe did not 15 make a chocolate cake," he free to do it. That is 16 not what I'm hearing. He is perfectly free to test the results. 17 18 THE COURT: All right. I understand now 19 more how his report was produced. I understand your 20 objection to it. I don't think the rules of evidence 21 preclude its admission, so I'm not going to change my 22 ruling on that. 23 Obviously, your cross-examine, your 24 requesting him in deposition and here today brings 25 out what you view as shortcomings of his report, and

I'll take that into consideration. So I believe it 1 2 goes to the weight of his evidence, but not its 3 admissibility. So I'm not going to change my ruling. 4 MR. WILLIAMS: Thank you, your Honor. THE COURT: Redirect. 5 MS. DIRAGO: Yes. б 7 REDIRECT EXAMINATION BY MS. DIRAGO: 8 9 I would like to talk to you a little 0. Okay. bit about the population deviation that you programmed 10 11 in for your simulations. And can you remind me what 12 that deviation was? 13 Α. Plus or minus 1 percent. 14 Q. And in your experience and as an expert in 15 this field, have you seen that 1 percent population 16 deviation employed before? 17 Α. Yes. 18 And have you, in fact, used a that Ο. population deviation? 19 20 Α. Yes. 21 Did you read Dr. Cotrell's report -- first Ο. 22 of all, do you know who David Cotrell is? 23 A. Yes. He's another professor who works in 24 the simulation field. I shouldn't say. He is a 25 professor that works in the simulation field.

1	Q. And do you know if he did an expert report
2	for the CRC analyzing all of the maps that the CRC
3	adopted?
4	A. Yes.
5	Q. And do you know what population deviation he
6	used for the congressional districts?
7	A. I believe it was 1 percent.
8	Q. Why don't you remove duplicates from your
9	simulated maps? And we were talking about this just
10	this morning and you explained it well. So if you
11	could do that for the Court, please.
12	A. Right. So if you wanted to know what
13	typical distribution of anything in America is, but I
14	used the allege gentlemen of American male heights,
15	and you cut off all the simulations, you might I'm
16	sorry, all the duplicates it's been a day for me,
17	too, you get (inaudible) in your sample, or Shaq.
18	Q. Who is the first person you said?
19	A. (Inaudible), but
20	Q. I don't know who that is?
21	A (inaudible), so he's not a good example.
22	Shaq.
23	Q. I get Shaq. Okay.
24	A. If you include Shaq if you get Shaq in
25	your sample and you let me nature all the duplicates,

you're not going to know how much of an outlier he is. 1 2 And you're going to look at that distribution of 3 heights and say, well, you know, 7'3", it's within the It's not until you include all the -- all the 4 bounds. American males who say they're 5'11", 5'10", 6-foot 5 б that you can really see that Shaq is a duplicate -- or 7 is an outlier. So that's why I don't did he duplicate. 8 9 Okay. So if -- I guess if you were polling 0. American males, you would get -- my husband is 5'8". 10 He doesn't like me to say he's average, you would get 11 12 a bench of duplicates that say -- that are 5'8"? That's correct. 13 Α. 14 So does that affect your results in a Ο. 15 negative way? 16 If you're trying to detect outliers, it Α. makes it better. 17 18 Okay. And what is the common practice now, Ο. 19 to remove duplicates or not? 20 Α. It is not to remove duplicates. 21 The titles -- the simulated versus Ο. 22 simultated in your titles, did that affect your 23 results? 24 A. Not at all. 25 Did that affect the partisan distribution of Ο.

the maps that you created? 1 2 Α. Not at all. 3 What about your conclusions, did that affect Ο. 4 your conclusions? 5 Not at all. Α. 6 Ο. Oh, another issue that was brought up by 7 opposing counsel was this issue about Dr. Chen having duplicate maps. Can you explain -- he said that 8 9 during your deposition you testified that he did have 10 a few duplicate maps. Can you explain what happened 11 there? I had gone through and looked and 12 Α. Yeah. done a visual inspection of the maps, and there were 13 14 maps that looked to be duplicated on the 29 that I managed to produce -- or high 20s that I managed to 15 16 produce in a timely fashion. During my deposition, counsel asked a 17 18 couple questions about things I had done or could have 19 done, and I thought they were well taken questions. 20 So at a break, I went back and tried the techniques 21 that he had described, and turned out that there were some maps that were very, very similar were not, in 22 fact, duplicates, so I corrected myself. I was wrong. 23 24 Q. And did you correct yourself on the record? 25 Α. I did.

1	Q. Do you know you know Dr. Chen?
2	A. Yep.
3	Q. Do you know Dr. Imai?
4	A. I don't know that I've met him.
5	Q. Okay. But you know of him?
6	A. Yeah, I know him. And I've conversed with
7	Dr. McCartan. I think he's Dr. McCartan now.
8	Q. Okay. Was Dr. Imai an opposing expert on a
9	case that you were on?
10	A. Yes.
11	Q. And is it typical between experts sorry,
12	you contested yesterday that you asked I think
13	Dr. Imai to produce some maps because they were
14	running slowly, right?
15	A. Correct.
16	Q. And then there was maps that were drawn in a
17	language you didn't code, so you asked for them?
18	A. Correct.
19	Q. So is that typical that experts,
20	professionally and collegially might point out some
21	differences or issues that they have with the code and
22	that the other experts will respond?
23	A. Typical, yeah.
24	MS. DIRAGO: Okay. That's it.
25	THE COURT: All right. Anything else for

this witness. 1 2 MR. WILLIAMS: No, your Honor. 3 THE COURT: All right. Thank you. 4 Mr. Trende. You may step down. 5 Thank you, your Honor. THE WITNESS: 6 THE COURT: Plaintiffs, call your next 7 witness. MR. HARRISON: So, your Honor, we are done 8 with the witnesses, other than the witnesses that 9 we've subpoenaed for trial, which I guess brings us 10 11 to what's going to happen with those witnesses. 12 THE COURT: Okay. 13 MR. HARRISON: They've received subpoenas. 14 I believe all to be here today and tomorrow, received 15 two days of wants fee covering two days. And I guess the normal practice anyway would be to pay them as 16 they need to stay an extra day, and so no one is 17 18 here. 19 THE COURT: So name one. Which one are you 20 talking about. 21 The individuals -- so it is MR. HARRISON: 22 true that we did not successfully serve for trial 23 Mr. Cervantes, although he's gotten two subpoenas for 24 (inaudible) documents. But Mr. Egolf, Ms. Leith, 25 Ms. Stewart and Mr. Wirt.

THE COURT: Okay. So if you were going to 1 2 call them, what would it be for? 3 MR. HARRISON: It would be for the purposes of asking them about the conversations and other 4 5 communications that they have had regarding the б construction of Senate Bill 1, your Honor. 7 THE COURT: You want to address. MS. SANCHEZ: Your Honor, I feel like we've 8 been over this a few times. And I specifically asked 9 10 tore clarification on this point when we were 11 discussing this yesterday, that the Court's privilege 12 ruling includes on your elaboration of it that these 13 witnesses are not subject to questioning and 14 compelled testimony on the subject of their 15 communications. We're talking about producing 16 contemporaneous statements within the period defined, all the things we talked about this morning. 17 And 18 those statements will speak for themselves and these 19 witnesses are not to be questioned about it. 20 So given that, my understanding is we 21 are not bringing these people in to testify. There 22 is not a non-privileged basis for doing that. 23 We are earnestly working on the 24 documentation production. I've been e-mailing this 25 whole time that we've been -- that the examination

1 has been going on to get this going and progressing 2 quickly. 3 But that's my understanding of where we are based on my (inaudible). 4 THE COURT: All right. And so that's my 5 б understanding, too. And I'm -- either I -- maybe I'm 7 not explaining it well enough. My reading of the case law, I cited a certain case in my decision 8 letter where questioning of a legislator actually 9 came up, and wasn't necessarily legislative privilege 10 11 that was raised but they're contemporaneous thoughts 12 on statements on passage of legislation at the time it was being made or admissible and relevant. 13 But 14 anything afterwards, I would not. 15 And then with -- on top of that, legislative privilege, which, again, has not been 16 ruled on in New Mexico, but I think that the way it's 17 18 been viewed around the country and other states and the way it's written into our Constitution, I don't 19 20 think they can be called to question what -- "Why did 21 you pass SB-1, or why did you" -- "what were your 22 thoughts in passing SB-1?" That they can't be 23 questioned about that. I think that's what falls 24 under legislative privilege. 25 Statements that they made to the public

outside of that privilege can be. And, again, I 1 2 believe those statements just have to speak for themselves. So, you know, if those statements are 3 admitted, those statement come into the record as to 4 what they said at that time about passage of SB-1. 5 б And so I don't -- I kind of agree. I 7 don't see what you would get out of calling to the I don't see what they could testify to 8 stand now. that is not privileged or is not already a public 9 10 statement. Certainly, your Honor. 11 MR. HARRISON: So we 12 agree with some of that sentiment, and (inaudible) we understand within what's the Court's order was. 13 So 14 we wouldn't be asking about their deliberative 15 process or whatnot. But just to use an example of 16 what we were -- continuing on our previous conversation, I could probably give Ms. Sanchez a 17 18 list of folks to conduct document searches for if I asked Brian Egolf, "Who did you talk to about" --19 20 "outside of caucus and senate and Ms. Leith, and whoever (inaudible), who did you talk about 21 22 redistricting with?" 23 And if he says, you know, "Sarah Jones 24 at the DNC, " okay, first we could ask what 25 conversations did he have.

"Well, I flew out to D.C. They talked 1 2 about how they really wanted the southern district to 3 turn blue," we would know then to add Sarah Jones to our list of folks for him to search for 4 5 communications with so we could ask -- again, the way б that we're defining public is not necessarily stuff 7 that you can Google, but stuff that, you know, we would -- we believe we could ask them about. And 8 that's more natural for a deposition. 9 10 THE COURT: Right. 11 MR. HARRISON: That is -- you know, it was 12 always going to be -- the question was going to be a 13 little awkward, because we haven't deposed them, so 14 we're kind of flying blind. But we do think there's 15 nonpublished material that's perfectly relevant. 16 Okay. I guess I'm thinking that THE COURT: that would not fall under public statements. It's 17 18 something that -- I don't know how to define it 19 exactly. But that it's known, it's -- you can -- you 20 can get it from another source, is what I'm saying. So I don't -- I agree with the defendants that I 21 22 don't think there's anything relevant or 23 non-privileged that they can testify to. 24 MR. HARRISON: Okay. We've made our record, 25 obviously. We respectfully disagree with your Honor.

But I think with -- with your -- with the Court's 1 2 ruling, the plaintiffs rest. 3 THE COURT: Okay. All right. Let's take a quick break, and then what are your plans on pursuing 4 this. 5 MR. WILLIAMS: Your Honor, we'll call б 7 Dr. Chen and put his testimony (inaudible). THE COURT: Okay. All right. Let's take 8 9 10 minutes and come back. 10 (Recess held from 10:43 a.m. 11 to 10:57 a.m.) 12 THE COURT: Dr. Chen, you'll raise your right hand. 13 14 Do you solemnly swear or affirm under 15 penalty of perjury that the testimony you'll give 16 will be the truth, the whole truth and nothing but the truth? 17 18 THE WITNESS: Yes, your Honor. 19 THE COURT: Thank you. 20 Go ahead. 21 JOWEI CHEN 22 having first been duly sworn, testified as follows: 23 DIRECT EXAMINATION 24 BY MR. WILLIAMS: 25 Q. Good morning, Dr. Chen. I appreciate you

coming out from Michigan for this trial. 1 2 MR. WILLIAMS: Your Honor, I'd like to 3 approach the witness and provide him a copy of his 4 expert report. 5 THE COURT: Okay. Thank you. I have marked б MR. WILLIAMS: 7 that as Exhibit C, your Honor. Would your Honor like a copy? 8 9 THE COURT: Yes. Thank you. BY MR. WILLIAMS: 10 11 Q. Dr. Chen, would you place state your name 12 for the record? A. Jowei Chen. 13 14 Q. And how are you employed, Dr. Chen? 15 A. I am an associate professor in the department of political science at the university of 16 17 Michigan in Ann Arbor, and I'm also a research 18 associate professor at the Center for Political Studies at the Institute For Social Research at the 19 20 University of Michigan. 21 What is your academic degree? Ο. 22 In 2004, I received a bachelor's degree in Α. 23 ethics, politics and economics from Yale University. 24 In 2007, I received a master's in statistics from 25 Stanford University. And in 2009, I received a Ph.D.

in political science from Stanford University.
Q. Are you an accomplished author, Dr. Chen?
A. Yes, sir.
Q. And what are you published in?
A. I've written academic papers on legislative
districting and political geography and distributive
spending.
Q. Would it fair to say that some of those
publications relate to ensemble simulations?
A. Yes, sir.
Q. Based upon your academic work, your
published work, what are your areas of expertise?
A. My academic areas of expertise are
legislative elections, spatial statistics, geographic
information, systems data, redistricting, racial
politics, legislatures, and political geography.
MR. WILLIAMS: Your Honor, based on
Dr. Chen's background, I would like to move him as a
qualified expert witness in those areas.
MS. DIRAGO: No objection.
THE COURT: All right. I'll declare
Dr. Chen an expert in those stated areas.
BY MR. WILLIAMS:
Q. Dr. Chen, what questions have we retained
you to answer in this case?

Defense counsel to evaluate the partisanship 1 Α. 2 of the SB-1 plan. And specifically, defense counsel 3 asked me to determine whether or not to partisan characteristics of the SB-1 plan are ones that could 4 5 have plausibly emerged from a partisan neutral map б drawing process that follows certain nonpartisan 7 district and criteria. Q. And based upon the question that we present 8 to you, did you arrive at any conclusions? 9 10 A. Yes, sir. So I found that the partisan 11 characteristics of the SB-1 plan at both a district by 12 district level, as well as at a plan wide level, are 13 within the normal range of computer simulated 14 districting plans that follow these certain 15 nonpartisan district and criteria. 16 So I found, in summary, that the partisan characteristics of the SB-1 plan could 17 18 reasonably have emerged from a partisan neutral map drawing process that adheres to all of these 19 20 districting criteria in this computer system 21 algorithm. 22 Q. All right. A Paragraph 6 of your expert 23 report, Dr. Chen, the heading is: The use of computer 24 simulated districting plans. 25 Do you see that?

1	A. Yes.
2	Q. Could you explain that paragraph to us?
3	A. Yeah. I'm explaining how in my research I
4	use computer simulation techniques that allow me to
5	produce a large number of partisan blind districting
6	plans that adhere to any particular districting or
7	specified districting criteria that I program into the
8	algorithm and that normally I would use as geographic
9	building blocks for these computer simulations, things
10	like census precincts.
11	Q. What is the algorithm that you used to
12	perform your simulations?
13	A. It's an MCMC version of Sequential Monte
14	Carlo algorithm.
15	Q. And I'm sure that means something to someone
16	with a Ph.D. from Stanford. What does that mean to a
17	mere mortal like myself.
18	A. So in general, what the algorithm does is it
19	draws random districting plans. However, it doesn't
20	just draw these lines completely at random. In
21	drawing random lines on random borders, it is
22	nevertheless, still adhering to specific districting
23	criteria, nonpartisan districting criteria, that I'm
24	programming into the algorithm. These are districting
25	criteria like equal population, geographic contiguity,

1

and several others.

So I program the algorithm to follow these criteria, but in following these criteria, it's trying to draw a random districting plan. So every time you run the algorithm and produce a new plan, it's going to be a different map. But all of these maps are still adhering to the set of criteria that I've programmed into the algorithm.

9 Q. Dr. Chen, I've put on the screen, your Map 1 10 from Page 10 of your expert report. Can you kind of 11 walk us through at very lie level how your algorithm 12 would have gone about generating this map?

A. This here on Map 1 is just an example of a computer simulated map that's been produced by the algorithm that I was just describing. And so this is just one example of the 1,000 computer simulated maps that my algorithm produced.

So at a very high level, what this algorithm is going is it's drawing these various borders.

Now, to go into a little bit more detail, it starts by taking all of these areas of New Mexico, and so there are roughly 2000 precincts in New Mexico, a little over 2,000 precincts, and it's going to divide these areas up into three congressional districts. But it's not just drawing
 these three districts at random. It's following the
 specific criteria that I've programmed into the
 algorithm.

5 So as I said, one example of these 6 criteria is equal population. There's also geographic 7 continuity and several others. The algorithm starts by taking all of these areas in New Mexico and 8 9 dividing them first into two parts. One that has one district and a second part that has two districts 10 11 worth of population. Then the next step is to divide that two district area up into single district areas. 12 13 And that's how you end up with three districts.

14 Now, an algorithm also uses what's 15 called MCMC iterations. And that's just a fancy way 16 of saying that the algorithm proposals iterative random changes to the borders between two districts. 17 18 And it does so repeatedly a large number of times. 19 Not all of these proposed changes are accepted, are 20 actually put into -- set in stone, though. Some are 21 accepted and some rejected. And it's doing this in 22 order to pursue all the various nonpartisan district 23 criteria that I've programmed into the algorithm.

24 So the algorithm, every step along the 25 way, is directed at following, adhering to these 1 nonpartisan district and criteria.

2	Now, it gets me into the algorithm, and
3	then this is very important. The algorithm has a map,
4	a congressionally simulated map, and it outputs that
5	map, it saves that map, it makes a permanent record of
6	that map. So the algorithm saves the map and that way
7	we can look at the map and analyze the map. So it's
8	outputting the map, it's saving it permanently onto
9	the computer hard drive to that we can come back later
10	and actually look at exactly what that map looks like
11	that was just produced by the computer algorithm.
12	So that's how the algorithm works. It
13	generates and saves 1,000 computer simulated maps.
14	And you end up with 1,000 computer simulated maps that
15	are saved on your hard drive that you can then look at
16	and analyze.
17	Q. You've mentioned 1,000 computer simulated
18	maps. Are any of your maps duplicates, Dr. Chen?
19	A. No, they're not.
20	Q. And why is that?
21	A. This is a random computer simulation
22	algorithm, so it is designed to draw random
23	districting plans that are adhering to these certain
24	nonpartisan districting criteria. Every one of the
25	algorithm is different. It would be problematic, it

would not really be random if I were to run this algorithm and find that it's producing the same exact map over and over and over again. That's not a random simulation. That's just producing the same map over and over and over again.

6 So what's really important here is when 7 the algorithm has produced the map, it saves the map. 8 And it does that a thousand times. And that way we 9 can actually look at these 1,000 different maps and 10 verify, which I did, that they are actually all 11 different.

12 Now, they're not completely different. They all still adhere to these certain nonpartisan 13 14 districting criteria. They, for example, are all 15 equally populated. They have some certain features in 16 common, like equal population and other criteria. So they're not completely random, but they are all 17 18 different, they are all unique maps. And that's the importance of it. That is a hallmark of having a 19 20 random simulation algorithm that's drawing random maps 21 while adhering to certain nonpartisan districting 22 criteria.

Q. Dr. Chen, you've mentioned the phrase
nonpartisan districting criteria a couple of times.
What does that mean?

1	A. There are a couple of different criteria
2	that I was asked to incorporate into my analysis.
3	I've talked about population equality, district
4	contiguity and there are several others.
5	But nonpartisan districting criteria
6	means that the algorithm is not using, is not
7	considering, is not inputting any partisan data. The
8	algorithm is partisan blind. It is blinded to
9	information about how many, say, Republican or
10	Democratic voters there are in a particular area.
11	That place no role in the algorithm.
12	That's what I mean by nonpartisan districting
13	criteria. The algorithm is not using partisanship as
14	a criteria. It is a nonpartisan algorithm.
15	Q. Let's walk through the criteria that we've
16	asked you to use to perform your work for us today,
17	Dr. Chen.
18	At Paragraph 9.A of your report, you
19	talk about population equality. Can you explain to
20	the Court what population equality means in the
21	context of your expert work?
22	A. Yes. So New Mexico, under the 2020 census,
23	has a population of about 2.1 million. And that means
24	that every congressional district has an ideal
25	district population of 705,840.7. And so that's

one-third of New Mexico's total population A that's the ideal district population. And my understanding is it's been the past practice in New Mexico to have congressional districts that are virtually equally populated. Not a deviation of, say, 1 percent, but virtually equally populated.

7 And so the SB-1 plan, for example, has populations such that the difference between the most 8 9 and the least populated district, the most populated 10 district is CD-2, and the least populated is CD-1, but 11 they have a difference of our 14 people, so it's virtually equally populated, a total difference of 12 13 only 14 people from the most to the least populated 14 districts. So that is the virtual equal population 15 standard in the SB-1 plan.

So defendants' counsel expected me to follow this same degree of population equality in all the computer simulated maps. Every simulated map was required to have a population of between 705,834 and 705,847. So that is a total difference of no more than 14 people from the top to the bottom populated district.

Q. Thank you, Dr. Chen. Paragraph 9.B
references the criteria we gave you on precincts
boundaries. Do you see that?

A. Yes.

2	Q. And I know you covered that in broad brush
3	strokes. Can you give us just a little snippet as to
4	what precinct boundaries, or how you instructed your
5	algorithm to deal with precinct boundaries?
6	A. In essence, don't split precincts. So
7	New Mexico's 2,163 precincts, don't take any one of
8	those precincts and split it between two or more
9	districts.
10	Q. I don't have a (inaudible) Ph.D., but I got
11	that.
12	Paragraph 9.C, contiguity, what does
13	that mean?
14	A. Contiguity means that all the areas of any
15	single district need to touch one another. So you
16	can't just jump, for example, from the southeast to
17	the northwest coroner of the state if those are areas
18	that are not otherwise touching one another. So every
19	district needs to be composed of areas that all touch
20	one another.
21	Q. Paragraph 9.D addresses municipality
22	considerations. Can you explain that to the Court?
23	A. So I was instructed to consider municipal
24	boundaries by first making sure that the three largest
25	metro areas, Albuquerque, Las Cruces, and the Santa Fe

metro area, that are -- these three are each primarily 1 2 assigned to their own representative districts. So 3 there's going to be for example one district that has the Santa Fe metro area. And that's going to be 4 different from the district that contains Las Cruces. 5 б Las Cruces and Santa Fe metro area are to be kept 7 intact and to never be split apart into multiple districts. 8

9 The Albuquerque metro area, certainly 10 larger than a single congressional district can hold, 11 but I made sure that Albuquerque had 60 percent of its 12 population assigned to a single district.

And then finally, South Valley and the Rio Grande River valley were required to be kept together in the same district.

But collectively what all this means is that you're going to have, of course, three congressional district in New Mexico in any computer simulated plan. And one out of those will be the Santa Fe metro area district. The second one will be the Las Cruces district. And the third will be the one that contains most of Albuquerque.

Q. Does that criteria, as it affects your algorithm Dr. Chen, have the effect of combining urban and rural communities?

1	A. Well, yeah, exactly. So like I said,
2	there's going to be one district that contains all
3	after Las Cruces, because Las Cruces isn't going to be
4	split apart. But of course that district is not going
5	to also include, say, Santa Fe. Instead, that means
6	Las Cruces district will combine Las Cruces with
7	surrounding rural areas and rural counties. And every
8	district is like that. It's going to be a /KPEUPBGS
9	of urban and rural.
10	Q. Your next criteria is titled I know January
11	reservation considerations. How did that impact your
12	work, Dr. Chen?
13	A. Defense counsel instructed me to treat
14	Indian reservations in a couple of different ways.
15	So first, the Mescalero Apache
16	reservation was always to be split apart so that
17	precinct 11 and precinct 56 in Otero County were to be
18	split apart.
19	I was also instructed to consider the
20	pueblo the Zuni Pueblo rest situation in such a way
21	that precinct 28 in McKinley County was split apart
22	from the rest of the Zuni Indian reservation.
23	And then finally, I was instructed to
24	always keep the Navajo Nation together and do that by
25	keeping San Juan County and most of McKinley County

1 together in the same district so that the Navajo 2 Nation wouldn't be split apart, with the exception of the aforementioned Zuni Pueblo portion of McKinley 3 County. But basically, the Navajo Nation was to 4 5 believe kept together. Q. All right. Dr. Chen, I'm going to skip the б 7 oil industry considerations. We're going to come back to it last. 8 9 At Paragraph 9.G, we have the 10 redistricting criteria of minimizing county splits. 11 How does that criteria impact your work? 12 Α. So this criterion is saying, unless you need 13 to do so, unless the computer needs to do so in order 14 to follow one of the aforementioned criteria, try not 15 to split counties. So one of the times you might 16 actually -- the computer might actually need to split counties, well, for example, to create equally 17 18 populated districts, you can't create perfectly equally populated districts just by using county 19 20 boundaries alone. At some point, you can going to have to split up a county in order to create equally 21 22 populated districts. 23 And so the computer algorithm bus allow for that. It allows for county splits only when 24 25 necessary to avoid violating one of these

2 to split counties. 3 0. The final criteria on your list, Paragraph 9.H, is geographic compactness. How does 4 5 that criteria impact your expert report, Dr. Chen? б Α. The computer tries to favor drawing 7 geographically compact districts. So intuitively, what's geographic compactness. A compact district, is 8 9 a nice looking district, a nicely shaped district, a 10 cleanly shaped district. And so the algorithm is 11 trying to avoid oddly shaped districts and trying to promote compactness in the drawing of the district 12 boundaries. 13 14 Q. All right. Let's return to what I think is 15 going to be the contentious criteria, Dr. Chen, which 16 is oil industry considerations, at Paragraph 9.F of 17 your report. Do you see that? 18 Yes. Α. All right. Tell me how oil industry 19 Q. 20 considerations impacted the work you do? So the instruction that I followed was to 21 Α. 22 require that no single district in any computer 23 simulated plan contains more than 60 percent of the 24 state's active oil wells. I programmed that criterion 25 into the simulation algorithm.

aforementioned criteria. But in general, it tries not

Q. And after running your simulations, do you have an opinion as to how that criterion affected the output of our simulations?

4 Α. Well, yeah. I looked at -- I saved, of 5 course, the 1,000 simulated plans, the computer б algorithm saves -- permanently saves and outputs the 7 1,000 computer simulated plans so that I could analyze them later with respect to -- with respect to oil 8 wells. And so that's what I did. I looked at the 9 number of oil wells in each simulated plan across the 10 11 various districts.

12 And I programmed that 60 percent oil 13 well rule, like I just said, and then I looked at the 14 distribution of oil wells in these simulated plans, 15 and I saw that indeed in these simulated plans, this 16 rule had the effect of spreading out the state's oil 17 wells across multiple congressional districts.

18 Q. Did you observe an effect of this criteria19 on the splitting of Eddy and Lea counties?

A. Yeah. I can see that many times this
criterion results in Lea and Eddy will go placed into
different districts. Doesn't always happen, but at
that certainly happens many times.

Q. All right. To the extent that you'vetestified today that it doesn't always happen, what do

you mean it doesn't always happen, Dr. Chen? 1 2 Well, it doesn't necessarily have to be the Α. 3 There's no guarantee that all of Lea County is case. one district and all of Eddy County is in a separate 4 5 district. It could be, for example, and it does б occasionally happen, that all of Lea County and a 7 portion of Eddy County can be placed into the same district. So that does sometimes happen in the 8 9 simulated plans. But, like I said, most of the time, 10 certainly Lea County and Eddy County are placed two 11 different districts. 12 Thank you, Dr. Chen. I'd like to talk to Q. you a little bit about your SMC -- excuse me, I think 13 14 you describe it as an MCMC version of SMC algorithm. 15 Am I getting that right? 16 Α. Yes. All right. Can you tell me first, is your 17 0. 18 MCMC version of SMC algorithm peer reviewed? 19 Α. Yes. 20 Ο. And where has it been peer reviewed, 21 Dr. Chen? 22 Most recently, until Yale Law Journal. Α. 23 Q. Do you know who your pierce were who 24 reviewed your paper in the Yale Law Journal. 25 Α. No. That's not the way that peer review

1 works. Peer review, in journal, is blind. So, for 2 example, when I review papers for the Yale Law 3 Journal, I am sent an anonymized manuscript, an anonymized paper. So I don't know who the author is, 4 and I'm not supposed to consider who the author is, 5 б which is why I'm not told. It's blind peer review. 7 And so I write up comments, I read the paper, I write up comments, send them back to the 8 9 journal, and then the journal considers those peer review comments in its publication process or in it's 10 11 editorial process. So it's a blinded peer-review 12 process. Likewise, when I am the one submitting a 13 14 paper to the Yale Law Journal, I don't know who the 15 peer reviewers are. And so it's pretty typical like 16 that. Peer review is typically, not always, but it's very commonly blinded on both ends. 17 Neither the 18 author nor the peer reviewers no the identity of the

19 other party.

20 Q. Now, in your deposition, Dr. Chen, I believe 21 Ms. DiRago asked you questions about peer review. And 22 in response to her question at your deposition, you 23 testified that you thought your document -- excuse me, 24 your paper and algorithm were peer reviewed in both 25 the Yale Law Journal and in the Cal Berkeley Law 1

Journal; is that right?

A. Yeah. I did say that. I went back and
checked after the deposition, so jail law journal is
peer reviewed, California Law Review, is not.

5

Q. Okay. Thank you, Dr. Chen.

6 Let's talk about what's different with 7 your algorithm than the SMC algorithm that's used in 8 Dr. Imai's Redist SMC?

A. Yeah, so like I said, my algorithm as an
MCMC. And as I explained earlier, I'll just briefly
explain it again, an MCMC is -- stands for Monte Carlo
Markov Chain. But what that means is there are
iterative changes, random changes that are proposed in
the algorithm, random changes that are proposed to do
borders between different districts.

And the fact that these are random proposed changes is really important, the randomness of it, and I'll explain in a minute why that's so important. But they're random changes. Some are proposed -- they're proposed. And some are accepted and some are rejected, all in pursuit of the criteria that I've built into the algorithm.

23 So why is this important to me, that 24 I -- I have MCMC, is because the SMC algorithm that 25 Imai and McCartan describe in their working paper, in 1

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proposing.

5 Now, the authors McCartan and Imai are б very honest and acknowledge that there are 7 limitations. And they're very helpful in describing these limitations. So they note for example, and I've 8 9 certainly seen this in that Redist SMC code, that Imai 10 and his co-authors have developed, Imai and McCartan 11 are very honest in pointing out an important 12 limitation of their code, which is that in some contexts, in some situations, in some settings, some 13 14 jurisdictions, some redistricting scenarios, the code 15 has a tendency to produce duplicate plans. And 16 sometimes, at a high rate. And they describe this as 17 plan diversity. So they are very open in discussing 18 this problem or this limitation of their code. They're very helpful about it, too. They're very 19 20 helpful in cautioning the users of that Redist SMC 21 algorithm, that code that they put out there. They're 22 very careful in cautioning the user to not blindly accept the results of their algorithm without 23 24 diagnosing and trying to fix duplicate problems. 25 They're very honest about this and helpful in

suggesting steps that you take if you have had that 1 2 you have a lot of duplicates that emerge from the 3 algorithm that they have developed. 4 And so they suggest some various steps. 5 One of these steps is that they simply suggest in б their working paper that future research could fry to 7 tackle this problem of plan diversity or duplicates. And they suggest, for example, that future research 8 might incorporate MCMC into the SMC. 9 10 Now, back to my algorithm, what I do 11 here is the plan algorithm or the districting algorithm combines SMC portion that sets up initial 12 districting blinds and then uses MCMC, uses MCMC 13 14 iterations, or an MCMC kernel to pursue these various 15 criteria that I've built into the algorithm. 16 And does that have the effect of eliminating Ο. or significantly reducing duplicates? 17 18 I checked and I found that in 1,000 plans, Α. it thousands zero duplicates. 19 20 Q. When you use the phrase plan diversity, does the term plan diversity and sample diversity, are 21 22 those interchangeable? 23 Α. Yeah. Plan diversity is basically saying, 24 you know, intuitively, if you're producing the same 25 plan over and over again, you're obviously not

producing a bunch of random plans. That's a lack of 1 2 plan diversity. So plan diversity is just a term that 3 Imai and McCartan use to describe that problem. Q. All right. So absent the existence of some 4 5 externality, like a statute, is there a problem with б having a lot of duplicates? I mean, absence some kind of external 7 Yeah. Α. limitation, like what you're suggesting, a lack of 8 plan diversity or seeing a bunch of duplicates would 9 10 suggest that what you're running is not really a 11 random algorithm. 12 Q. And just so that we can clarify, when I'm 13 talking about an externality, have you see 14 externalities imposed upon redistricting that force 15 the existence of duplicates? 16 In situations completely outside of Α. Yeah. New Mexico, there may be statutory or constitutional 17 18 requirements that are very specific and very esoteric 19 that might require that a particular district or set 20 of districts be drawn in a very particular way in some jurisdiction. But the examples I've seen are not in 21 22 New Mexico. 23 Q. Are you aware any externality that would have caused duplicates in redistricting New Mexico? 24 25 Α. No.

Q. Dr. Chen, I want to talk to you about a 1 2 portion of your expert report at Page 13 that is 3 titled measuring the partisanship of districting plans. Tell me what that section of your work is 4 5 about. I'm explaining in this section how I'm б Α. 7 booing to compare the SB-1 plan and all of the 1,000 computer simulated plans in terms of their 8 partisanship. And I'm going to compare partisanship, 9 10 or I do compare partisanship in my report both at a 11 district level, district by district, as well as at a 12 plan wide level. And so I explain in this section here 13 14 how I use two different ways, two different measures 15 of measuring the partisanship of districts. And so 16 one of these measures. And so one of these measures is to use the former man's index, and a second measure 17 18 is to use voter registration data. Q. Paragraph 13 of your report, that section is 19 20 titled the "Republican Performance Index." What do we 21 need to understand about the Republican Performance 22 Index, Dr. Chen? 23 Α. The most common way of measuring 24 partisanship of districts used by map drawers is to 25 use recent statewide elections, and that's exactly

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what the performance index is. So the performance 1 2 index is a measure, it's developed by Research & 3 Polling, and it essentially aggregates together statewide elections. Specifically it aggregates 4 5 together the 26 competitive statewide elections that have been held in New Mexico since 2012, from 2012 to б 7 And what it's doing is it's going to be able to 2020. characterize any given district in terms of its 8 9 Republican Performance Index.

And you can just think of this Republican Performance Index as the Republican candidates collective share of the two-party votes across these 26 elections for any given district.

14 So, for example, if we were looking at 15 CD-1 in the SB-1 plan, that's a single district, and 16 we can characterize it's Republican Performance Index 17 by first counting up the total number of votes for all 18 the Republican candidates in those 26 contest, those 19 26 statewide contests, and then do the same for the 20 Democratic candidates in those 26 contests.

21 So you can see here in the Paragraph 14 22 table that for CD-1, there are a total of a little 23 over 4 million votes for Republican candidates in 24 CD-1. And then the Democrat I can candidates get a 25 little over 4.6 million. So what is the republic

share of that two party vote total? 1 It's 2 46.5 percent. So we can characterize CD-1 in the SB-1 plan as have a Republican Performance Index of 3 46.5 percent. And you can just intuitively think of 4 5 that as for the voters in CD-1, 46.5 percent of the votes cast during 2012 to 2020, were in favor of the б 7 Republican candidate in the statewide elections. The next portion of your expert report, 8 Ο. Paragraph 15, is title "Partisan Affiliation of 9 10 Registered Voters." 11 Tell the Court what the import of that 12 section is, Dr. Chen. This is just a different way of measuring 13 Α. 14 the partisanship of a district, using voter 15 registration partisanship data. And so for any given 16 district you just counts up how many registered Republicans and how many registered Democratic voters 17 18 there were. And then you calculate what was the 19 Republican share of these Democrat plus we public can 20 registered voters of these two-party registered 21 voters. 22 So in Paragraph 16, there's a table 23 there. And the top row of the table is describing 24 CD-1 in the SB-1 plan. And you can see that CD-1 has 157,000 registered Republicans, and CD-1 has 211,916 25

registered Democrats. So what's the Republican share 1 2 of that total, it's 42.6. 42.6 of the two-party 3 registered voters are Republicans. So that's just a different way of measuring the partisanship of 4 districts. 5 б Q. On Page 16 of your report, Dr. Chen, you 7 have the heading, "District Level and Plan-Wide Partisans Compares of the SB-1 Plan and Simulated 8 Plans." Do you see that? 9 10 Α. Yes. 11 What do we need to take away from that 0. portion of your report? 12 So in this next section of the report, what 13 Α. 14 I do is compare is SB-1 plan at a district by district 15 level, as well as characteristics for the entire plan. 16 And I compare SB-1 to the 1,000 computer simulated plans that I produced. 17 18 And so in the following sections, I 19 present some district by district comparisons. And 20 then I present some plan-wide comparisons. And these 21 comparisons can be done using the performance index as 22 the measure of partisanship, and they can also be done 23 using the voter registration numbers, the voter 24 registration share of -- the Republican share of voter 25 registration as the measure of partnership. And so

presented both ways later on in this report. 1 2 Q. Did you, Dr. Chen. 3 At paragraph -- beginning at Paragraph 20 on Page 17, you have a section of your report 4 5 titled, "District By District Comparisons Using the б Partisan Index. " Do you see? 7 Α. Yes. All right. I'm going to put a chart up to 8 Ο. help you explain that section to the Court. 9 10 So this is a district by district Α. 11 comparison. And you can see that this figure has 12 three rows. I'll explain what each of these three 13 rows means, I'll explain why you see a bunch of gray 14 circles there and some red stars. 15 These are district by district 16 comparisons, and when I say "district by district," 17 here's what I mean, for every plan, the SB-1 plan, as 18 well as the 1,000 computer simulated plans, we're 19 going to directly compare the most Republican district 20 within each plan. 21 Now, the SB-1 plan has CD-2 as its most 22 Republican district. So that's why you see CD-2 with 23 a red star labeled on the top row of this figure. 24 Now, what's actually being plotted here is the 25 Republican Performance Index of that district. And so

that's what's being plotted along the horizontal axis. 1 2 And you can see that the Republican Performance Index 3 of CD-1 is 46.5. And that was reported in Paragraph 4 14 of my report. So that's why you see the red star 5 where it is, where CD-2 is on the top row. б Now, let's compare CD-2 to the most 7 Republican district in each of the 1,000 computer simulated plans. And that's why you see 1,000 gray 8 9 circles, that huge blob of 1,000 gray circles on that 10 Those represent the partisanship of the most top row. 11 Republican district Republican district within each of 12 these 1,000 computer simulated plans. 13 And, again, I'm plotting them along the 14 horizontal axis in terms of their Republican 15 Performance Index. 16 So let's just stay for the used on that top row for right now. What is that top row showing 17 18 us. CD-2 has a Republican Performance Index that is 19 absolutely more favorable to Republican than 20 33 percent of the simulated plans. And 67 percent of 21 the simulated plans have the most Republican district. 22 I'm sorry. I'm going to start over 23 again. I misspoke. 24 So CD-2 is the red star on the top row. CD-2 has a Republican Performance Index that is more 25

Republican than 33 percent of the computer simulated 1 2 plans most Republican district. 67 percent of the 3 simulated plans have the most Republican that is more Republican favorable, that is more Republican than 4 5 CD-2 is. б So I hope I -- I got that out right this 7 I'm going to just restate it again to make sure time. I stated that correctly. 8 9 33 percent of the simulated plans have the most Republican district that is less Republican 10 11 than CD-2. And 67 percent of the simulated plans have 12 the most Republican district that the more Republican than CD-2. 13 14 So what do those two numbers mean? Ι 15 mean, first of all, those two numbers are shown in the 16 two red arrows at the top of that first row. Now, what are those two numbers telling us? 17 18 Well, it's telling us that CD-2 is well 19 within the distribution of the computer simulated 20 plans in terms of it's most Republican district. 21 Sometimes, CD-2 is more Republican than the most 22 Republican district in the simulated plans, bus sometimes it's less. This split the 33 versus 67 23 24 percent. So it is in the middle of the distribution. 25 It's not right at the middle of the distribution, but

it is well within the normal range of the 1 2 distribution. 3 In other words, in this top row here, CD is not a statistical outlier, it is not a partisan 4 5 outlier. It has a partisanship that is very much б within the norm of what we see in the most Republican 7 district in 1,000 computer simulated plans. It is not a statistical outlier. That's what we see in the top 8 9 row. 10 Now, we can do the same comparison for the second most Republican district, what you see on 11 12 the second row of this figure. And that's CD-1 in the 13 SB-1 plan. So CD-1 /TPH-PLT SB-1 plan has -- has a 14 Republican Performance Index of 46.5 percent. And so what you can see here in the second row is that CD-1 15 16 is more Republican than 87 percent of the simulated 17 plan second-most Republican district. And it is less 18 Republican than 13 percent of the simulated plans most Republican district. 19 20 So it's actually to the right of the 21 median, but it's still within the normal range of the 22 distribution. In other words, CD-1 a statistical 23 outlier in terms of partisanship. 24 And you go to the third row, and you see 25 the same thing with CD-3. CD-3 is the least

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Republican district in the SB-1 plan, but it is within the normal range of the distribution of the simulated plans. 33.2 percent of the simulated plans have a least Republican district that is less Republican than CD-3, and 66.8 percent of the simulations have one that's more. So it is within the normal range of the distribution.

So we see the same thing for all three 8 of these districts. They are all within the normal 9 10 range of the distribution at a district level when 11 compared to the 1,000 computer simulated plans. None of the three districts are partisan outliers. None of 12 13 them are extreme in their partisan characteristics 14 when compared to the 1,000 computer simulated plans.

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Q. Thank you, Dr. Chen.

Let's look at Page 21 of your report that begins with the heading, "District by District Comparisons Using Voters Party Registration." Can you explain that section of your report to us. ?

A. We're about to look on Figure 2 on the screen here, at a very similar comparison. And this figure is exactly the same as the last figure that we saw, with one difference. And that one difference is that now I'm measuring partisanship using registered voters rather than the Republican Performance Index.

So along the horizontal axis here, you 1 2 can see that what I'm measuring all these districts by 3 is each district's Republican two-party share of 4 registered voters. Two-party share meaning the share 5 of Democrat plus Republican voters. So it's a б different measure of partisanship, but the results are 7 exactly the same in terms of the conclusion. For all three districts we're seeing on 8 this figure, all three districts in the SB-1 plan are 9 10 well within the normal range of partisanship compared 11 to the 1,000 computer simulated plans at a 12 district-by-district level. 13 So you see in the top row, CD-1, it is 14 more Republican than 58.3 percent of the simulate 15 plans most Republican district. But it's less 16 Republican than 41.7 percent of the simulations. So it is getting close to the median of the distribution. 17 18 It's not right at the median, but it's very close to the middle of the distribution. It's very much within 19 20 the normal range of the distribution. 21 Same thing for the second row, which 22 describes CD-2, and same thing for the third row 23 describing CD-3. All three of these districts you see 24 here are well within the normal range of partisanship. 25 None of these three or statistical outliers. None of

them are outliers in terms of the Republican 1 2 partisanship. All of them have partisan 3 characteristics at the district level that are very typical of and can very much be expected from what we 4 5 see in the 1,000 computer simulated plans. б Ο. Thank you, Dr. Chen. 7 At the bottom of Page 23, Paragraph 34, you have a heading titled, "Partisanship of the 8 9 District Containing Las Cruces." What's the import of 10 that section? 11 So we're going to do something a little bit Α. different here in this next figure, in this section. 12 This time I'm not going to compare the simulated 13 14 districts to the SB-1 districts in terms of the most 15 Republican, the second-most Republican district, the 16 third-most Republican district like we just did a 17 moment ago. 18 In this figure, I'm going to do something a little bit different. What this figure is 19 20 comparing is just the district that contains 21 Las Cruces. And of course in the SB-1 plan, that's 22 CD-2. So if you look at the partisanship of that 23 district, it's about 47 percent using the Republican 24 Performance Index, CD-2 is. So CD-2, that's the red 25 star in the middle of the upper half of this figure.

So that's why there's a red star, and it's right
 around 47 percent, because CD-2 has a Republican
 Performance Index of 47 percent.

4 Now, let's compare it to the 1,000 5 simulated plans. But what I'm going to compare it to б in this figure is I'm just going to compare it to the 7 district containing Las Cruces from each of the 1,000 computer simulated plans. So I'm just comparing the 8 Las Cruces based district in the SB-1 plan to the 9 Las Cruces based district in the 1,000 computer 10 11 simulated plans. And I'm comparing these districts in 12 terms of the Republican Performance Index.

13 So what do we see here in the top half 14 of this figure? Well, 52 percent of the Las Cruces 15 districts in the 1,000 computer simulated plans, are 16 less Republican than CD-2 is, while 48 percent of the Las Cruces districts in the 1,000 computer simulated 17 18 plans are more Republican. What does that mean? CD-2is very close to the median of the distribution. 19 It's 20 right in the middle of that distribution. You can see 21 that visually here, but you can also see it in terms 22 of the actual distribution. 52 percent below, and 48 23 percent above. It's very close to the median of this 24 entire distribution.

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And so what that's telling us is is the

SB-1 plan's district for Las Cruces has a partisan characteristic that is right near the median of what can be expected for Las Cruces districts among the 1,000 computer simulated plans. It's clearly not an outlier. It's clearly not a partisan outlier at all. It's very close to the median.

7 And the bottom half of this figure just shows that same information except in the form of 8 9 histogram. So the histogram is just telling us that 10 33.3 percent of the simulated plans are creating a Las Cruces district that is right at are 47 percent 11 Republican Performance Index. In other words, that's 12 13 the most common outcome that you can see on this 14 histogram. And that's pretty clear that that matches 15 CD-2's Republican Performance Index. CD-2 is showing 16 with that read dashed line in the lower half of this figure. 17

And, again, that's just the same thing that we just talked about a moment ago, which is that CD-2 is very typical and very close to the median of the sort of partisan characteristic that you'd see for a Las Cruces based district in the 1,000 computer simulated plans.

Q. Dr. Chen, I'm going to show you Figure 4from that same section. What is the import of Figure

4? 1 It's exactly the same thing that we just saw 2 Α. 3 on Figure 3, in the previous figure, with the only difference being that here I've measured partisanship 4 5 of the district using the Republican share of б registered voters rather than the Republican 7 performance index. But you see the results are largely the 8 When you measure partisanship using registered 9 same. 10 voters, the results are largely the same. CD-2 is very much within the normal range of the distribution. 11 It's reasonably close to the middle of. It's a little 12 bit to the left of the median. But it's clearly not 13 14 at all close to being a statistical outlier. It's 15 very much typical of the partisanship of districts for 16 Las Cruces that emerged in the 1,000 computer simulated plans. 17 18 Q. Dr. Chen, on Page 28 of your report, titled, "Statewide Comparisons," what does that section of 19 20 your report discuss? 21 In this section of the report, I've Α. 22 presented or I've calculated some statewide 23 comparisons of the SB-1 plan to the 1,000 computer 24 simulated plans. And so here, we've got figure five 25 from the reports on the next -- on Page 29.

1 And this figure is presenting as a 2 comparison of a statewide plan characteristic. And 3 specifically what I've measured here is for every plan, whether the SB-1 plan or computer simulated 4 5 plan, I'm asking how many districts were there in the plan across three district, how many districts have a б 7 46 to 54 percent Republican Performance Index. Every plan has three districts, so the 8 9 answer is going to be zero, one, two, or three. 10 Now, let's start by looking at the 11 simulated plans. The simulated plans are described 12 here with this histogram on this figure. So what's 13 this histogram telling us? It's telling us that the 14 majority, two-thirds of the simulated plans, have exactly one district that is between 46 to 54 percent 15 16 Republican Performance Index. 67.2 percent is the number under that tallest bar in the middle. That's 17 18 telling you that two-thirds of the plans have exactly 19 one such district. A very, very small fraction have 20 zero such districts. That's that 1.5 percent on the 21 left. And then one-third of the plans, 31.3 percent, 22 have two such districts, two districts between 46 to 23 54 percent Republican Performance Index. So that's 24 describing the 1,000 computer simulated plans. 25 Now, let's compare the simulated plans

to the SB-1 plan. How many districts does the SB-1 1 2 plan have in this range? It's two. There are two 3 districts that have between a 46 to 54 percent Republican Performance Index. So what this is telling 4 5 us is that the SB-1 plan, in creating two districts of б 46 to 54 percent Republican Performance Index is at 7 the high range, at the high end of the range of the simulations. It's -- there are no simulations that 8 9 create more than two such districts. And the vast 10 majority of the simulations actually create fewer than 11 So it's at the high ends of the range. two. 12 Q. Dr. Chen, having gone through your report, 13 what are the conclusions that you have drawn from your 14 analysis? 15 So my conclusions come from a district-level Α. comparison, as well as a plan-wide comparison. 16 And I found that the partisan characteristics of the SB-1 17 18 plan are typical, are well within the normal range of the partisan characteristics of plans that are drawn 19 20 with a partisan lined algorithm adhering to the 21 districting criteria that I followed. 22 So both with the plan wide level, as well as district-by-district level. I found that the 23 24 partisan characteristics of SB-1 could plausibly have

25 emerged from a partisan neutral map drawing process

adhering to the criteria that I followed in the 1 2 algorithm. 3 MR. WILLIAMS: Your Honor, at this time, I would move the admission of Dr. Chen's report into 4 5 evidence as legislative defendant's Exhibit C. б THE COURT: We haven't done C? No, that's 7 how you marked it? 8 MR. WILLIAMS: That's how I've marked it. 9 THE COURT: Any objection? 10 MS. DIRAGO: No. 11 THE COURT: All right. Exhibit C will be 12 admitted. 13 MR. WILLIAMS: Thank you, your Honor. 14 BY MR. WILLIAMS: 15 Q. Dr. Chen, I've got a couple other questions for you. Were you present for the deposition -- or 16 17 excuse me, the testimony of Mr. Trende? 18 Yes. Α. Q. Did you see Plaintiffs' Exhibit 3, which is 19 20 a chart that reflected the number of what they say is 21 the number of oil wells in New Mexico for ten different counties? 22 23 A. Yes. 24 Q. All right. Did I ask you to look at that 25 last night?

1	A. Yes.
2	Q. And does that chart that plaintiffs have
3	presented, does it reflect the number of oil wells in
4	those ten counties?
5	A. You're asking me if it reflects the number
6	of active oil wells
7	Q. Yes, sir.
8	A within those ten counties.
9	Q. Yes, sir.
10	A. The answer is no.
11	Q. For Colfax and Harding County, are there any
12	active oil wells in those counties?
13	A. There are no active oil wells in those two
14	counties.
15	Q. Were you able to determine what Mr. Trende
16	had done with the shapefile that he analyzed in
17	reaching these incorrect numbers?
18	A. Yeah. I mean, it was pretty much /*F pretty
19	clear what happened. The shapefile that Mr. Trende
20	clearly looked at was a shapefile describing all wells
21	across the State of New Mexico, at least the ones that
22	were logged by OCD. And so the shapefile lists a lot
23	of wells that are not oil wells. And the shapefile
24	also lists lots of wells that are not active. Lots of
25	wells are plugged up, they've been discontinued,

they're not in use, they're not active oil wells. 1 2 But like I said, a lot of them are 3 just -- on oil wells, are something else. They're CO, wells, they're gas wells, a couple of other types. 4 5 And it's pretty clear from the numbers б on Mr. Trende's table that he added up all wells, 7 regardless of whether or not they were oil and regardless of whether or not they were active or not. 8 9 I have one last line of questions for you, Ο. Dr. Chen, before I hope the judge lets us go to lunch, 10 11 and that relates to nonpartisan criteria. 12 I anticipate that you're going to get some cross-examine on nonpartisan criteria. 13 The 14 nonpartisan criteria that I think is going to be at 15 issue are the state oil and gas considerations. 16 In your experience redistricting, Dr. Chen, can nonpartisan criteria have a partisan 17 effect? 18 Well, sure. That happens all the time. 19 Α. 20 Q. In what context does that occur, Dr. Chen? 21 Pretty much any criterion could have a Α. partisan effect, even if it is a nonpartisan criteria. 22 23 So to the extent that you would adhere districting 24 lines to county boundaries, to municipal boundaries, 25 those things can have partisan implications. They

1 don't necessarily have partisan implications, but they 2 certainly can. 3 And even better example is in southern 4 states, when, say, a districting plan is drawn on the 5 basis of racial considerations, for example, to create a majority black district, well, if you create a б 7 majority black district in a deep south state, you're probably creating a Democratic leaning district. 8 That's just the way that race and political geography 9 works in the south, right? And I mean that's -- of 10 11 course that's well known. So all kinds of nonpartisan criteria. 12 13 And when I say counties, when I say race, or racial 14 considerations when drawing the majority black 15 districts, these are obviously considerations that are 16 not actual partisanship. They are something else 17 that's not partisanship. But of course they can have 18 partisan effects. 19 Q. All right. Thank you, Dr. Chen. 20 MR. WILLIAMS: I pass the witness. 21 Okay. I think we'll break for THE COURT: 22 hundred, it's about noon. How many other witnesses 23 do you plan on calling? 24 MR. WILLIAMS: Your Honor, we have one more witness after this. 25

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THE COURT: Okay. So my thought is, we'll 1 2 break till about 130, get a little bit longer lunch 3 so we're not too rushed. MR. WILLIAMS: That's fantastic. Thank you, 4 5 your Honor. б THE COURT: All right. We'll break till 7 130. Thank you. (Recess held from 11:53 a.m. 8 9 to 1:31 p.m.) THE COURT: Dr. Chen, if you want to come 10 11 back up. Or do we need -- let me -- before you come 12 up -- are we on the order. THE COURT MONITOR: Yes. 13 14 THE COURT: And update, what do you know as 15 far as subpoenas? 16 MS. SANCHEZ: Everybody's working on the 17 searches as we speak. 18 THE COURT: Okay. Any idea -- do they have any way to say how long it might take? 19 20 MS. SANCHEZ: I have varying estimates, but so far we're still looking good for beginning of next 21 22 week. Maybe some of it sooner. But --23 THE COURT: Okay. 24 MS. SANCHEZ: So in progress. 25 THE COURT: All right. At the end of the

day, I might ask you again to see if you have an 1 2 update. 3 MS. SANCHEZ: Sure, sure. 4 THE COURT: I'm sorry, Dr. Chen. If you 5 want to come back up. б All right. 7 CROSS-EXAMINATION 8 BY MS. DIRAGO: 9 Hi, Dr. Chen. Q. 10 Good afternoon, Ms. DiRago. Α. 11 How are you? Ο. 12 I'm doing well. Thank you. Α. So we met virtually, never in person. 13 Ο. But 14 as you know, I am counsel for the plaintiffs in this case. So I want to just kind of get could be to it. 15 16 So according to you, you used partisan blinds algorithm to create simulated maps, correct? 17 18 Α. Yes. And, in fact, it is important that your 19 Q. 20 algorithm be partisan blind, right? 21 It's designed to be partisan blind, so of Α. 22 course it is important that I programmed it the way 23 that I designed. 24 Q. Okay. And your simulation process is design

25 to ignore all partisan considerations?

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It is designed to ignore partisanship 1 Α. 2 because it does ignore partisanship. It ignores 3 partisan data, partisan I know inputs. 4 Okay. Let's look at your report, Page 4, 0. 5 please. б MS. DIRAGO: Judge, I assume you have the 7 report still. THE COURT: Yes. 8 9 MS. DIRAGO: Yeah. 10 BY MS. DIRAGO: 11 This simulation process, this is down at the 0. bottom of Page 4, Paragraph 6. This simulation 12 13 process ignores all partisan and racial considerations 14 when drawing districts. You agree with that, don't 15 you? 16 Yes, ma'am. Α. Okay. Same location here. Okay. Actually, 17 Ο. 18 the last sentence on Page 4. The computer simulations 19 are programmed to draw districting plans following any 20 set of specified districting considerations. 21 Is that correct, that the simulations 22 are programmed? 23 Α. I think the more accurate way to phrase that 24 is programming a computer algorithm. The algorithm 25 produce the simulations. That's what that sentence

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means in more detail.

Q. Right. So this is actually inaccurate. And 2 3 trust me, I wouldn't really care normally, but I think it's been brought up a few times. Everybody makes 4 mistakes, right? 5 б Α. I'm not sure what you're saying. 7 0. So this sentence is inaccurate? No. I just explained that the program is a 8 Α. program of a computer algorithm. The algorithm is 9 produced in computer simulations. That's what I mean 10 11 when I say computer simulations are programmed. I'm 12 not sure what that's not clear to you. Q. Well, no, it's clear. The simulations are 13 14 programmed to draw districting plans. You program the simulations? 15 16 The simulation maps prosecute produced by Α. the algorithm. 17 Q. I don't need you to explain it more words. 18 My point is that this is an inaccurate statement. 19 20 A. Absolutely it's not an inaccurate statement. If you --21 22 Then why do you have to keep explaining it Ο. 23 with different words? 24 MR. WILLIAMS: Objection, your Honor. 25 Argumentative.

THE WITNESS: Yeah, I'm sticking with my 1 2 same answer. 3 THE COURT: Yeah. BY MS. DIRAGO: 4 5 Q. Okay. And normally, I'm not the kind of attorney to worry about that. But I think we do have б 7 to take some -- point out some the inaccuracies in your report this time, unfortunately? 8 9 MR. WILLIAMS: Objection, your Honor. 10 That's not a question. THE COURT: Correct, that's not a question. 11 12 BY MS. DIRAGO: Q. Okay. So let's look at the rest of that 13 14 sentence. I think that's accurate. You say, let's 15 see, the simulations are programmed to draw 16 districting plans following any set of specified 17 districting consideration, such as population 18 equality, avoiding county splits, protecting municipal 19 boundaries and pursuing geographic compactness. 20 Is that accurate? 21 Α. Yes. 22 And do you program -- and you programmed Ο. 23 your algorithm here to consider those considerations, 24 right? 25 Those considerations are all detailed more Α.

1	in Paragraph 9, but I think that all those examples
2	that I gave of districting considerations are
3	described in more detail in Paragraph 9.
4	Q. So did you program your algorithm to respect
5	all these considerations?
6	A. This sentence right here is me introducing
7	the abstract concept of computer simulated districting
8	plan.
9	Q. Mm-hmm.
10	A. This is not a thorough and complete
11	description of the actual criteria that I used in the
12	computer algorithm that I used to produce the 1,000
13	plans here. For that, I would refer you to
14	Paragraph 9, where I
15	Q. That's not my question.
16	A. Let me just finish.
17	Q. So those those criteria are described
18	clearly in Paragraph 9. Now, go back to the sentence
19	that you're actually asking me about. This is talking
20	about in general, here are some examples of criteria
21	that I could put into put as specified district and
22	considerations into algorithm. The purpose of this
23	sentence is not saying this is actually what I did
24	here. These are just some general examples. So a
25	general example is population equality?

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MS. DIRAGO: Judge, he's not answering my 1 I don't know when we cut this off. 2 question. T'm 3 asking him if he programmed his algorithm with these considerations. That is a fair, direct, simple 4 5 question that he's not answering. MR. WILLIAMS: Your Honor, he is answering б 7 the question. No, he's not. 8 MS. DIRAGO: 9 MR. WILLIAMS: She just doesn't like the 10 answer. 11 MS. DIRAGO: No. It's not an answer. 12 THE COURT: All right. It is a narrative 13 answer that is -- I would say you're trying to answer 14 a question that you believe she's asking rather than the one she is directly asking. So I understand that 15 16 you think her question should include something else, but for right now, just answer the question that 17 18 she's asking. The opportunity for you obviously 19 later to further expound on that. 20 THE WITNESS: Thank you, your Honor. 21 THE COURT: Go ahead. Reask your question. BY MS. DIRAGO: 22 23 Ο. The set of criteria that you have on the 24 bottom of Page 4, which I'll read it again, population 25 equality, avoiding county splits, protecting municipal

boundaries and pursuing geographic compactness. 1 Did 2 you program your algorithm in this case to respect those considerations? 3 I generally did, but this is not a detailed 4 Α. 5 description of what I actually programmed into the б algorithm. 7 Do you --Ο. The answer is yes, I generally did. 8 Α. What do you mean by "generally"? 9 Q. 10 This is a general description. So I'm just Α. 11 pointing out that this is not a detailed description 12 of the criteria in the algorithm. That comes later 13 on. This is a very general description of examples of 14 criteria that I could program into the algorithm. But 15 I'm not specifically saying that this -- this actually 16 articulates exactly how I'm including these various criteria. 17 18 I'm not asking you about all the O. Okay. criteria. I'm asking you if you programmed your 19 20 algorithm to -- to consider these criteria. And you 21 said you generally did. And I just don't understand how you generally program an algorithm. You're the 22 23 expert. I just want you to explain that to me. 24 A. Yeah, I'm sticking with my same answer. Ι 25 generally did. And I'm happy to explain in some more

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detail here.

Q. I would like you to explain what you mean by
you generally programmed your algorithm to respect
these criteria.

A. Yeah, sure, I'm happy to. So let's take the first one, population equality, that does not say -that phrase, population equality, that's a general statement. It's saying, I'm generally programming the computer simulations in general, as I always do, so pursue population equality.

It does not specify exactly what threshold of population equality. For that, we'd have to look later in the report, Paragraph 9, where I do actually say exactly what population equality threshold was used. That's why I'm using the word "generally."

Avoiding county splits, same thing. Avoiding county splits is just a general statement. I did not explain exactly what I mean by county splits. For that, we need to look later to the report for the specifics in Paragraph 9, where I explain exactly where county splits follows on hierarchy.

There are some times when the computer algorithm is allowed to use county splits. So there are some instances in which the algorithm is not

actually avoiding county splits. But in general, it 1 2 is. 3 That's what I mean when I juice in a qualifier generally. It's because this is a general 4 5 statement. It is note a specific articulation of б exactly how all of the criteria are programmed into 7 the algorithm. Okay. So when you said you generally 8 Ο. 9 program these criteria, the generally was not a 10 qualifier of how you program it. It's just a 11 qualifier of how you're describing them in this 12 sentence? No, it isn't. 13 Α. 14 I only want to get to the bottom of what Q. 15 generally programmed means. 16 I'm sticking with my previous answer, and Α. what I said --17 18 It does not quantify the word "program"? 0. That's incorrect. I'm sticking with my 19 Α. 20 previous answer, which is that it is a general description of the criteria. And when I use the word 21 22 general --23 Q. Okay. 24 A. -- I'm saying --25 Ο. No, no. I didn't mean to stop. Now I get

1	it. It's a general description of the criteria. That
2	I get. Okay. I mean, please finish, though, if you
3	have more to add.
4	A. I'm just sticking with my previous answer.
5	Q. Okay. So are these criteria here at the
6	bottom of Page 4 and bleeding over to Page 5, are
7	these traditional districting criteria?
8	A. They are.
9	Q. Okay. Are there any other criteria that you
10	would consider traditional districting criteria?
11	A. Yes.
12	Q. What are they?
13	A. District contiguity is considered a
14	traditional districting principle, and I'm pretty much
15	I make no mention of that here. Again, it's just not
16	a complete list of criteria here. By I think
17	contiguity is pretty clearly a traditional districting
18	principle.
19	Q. Are there any other traditional districting
20	criteria that you use? Strike that.
21	Are there any other tradition
22	districting criteria besides contiguity that are not
23	listed here on the bottom of Page 4 and bleeding over
24	to Page 5?
25	A. Let me just look through my list of criteria

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in Paragraph 9 to try to give a more complete answer 1 2 to your question. 3 It appears that this -- again, this very general, abstract sentence here does not include any 4 5 mention of preserving precinct boundaries, which I б describe at much greater length in Paragraph 9 later 7 on in the report. So preserving precinct boundaries, I 8 9 think is a traditional districting principle. And I 10 don't believe I've listed it in this paragraph here. 11 Q. Okay. Are there any others that are not listed there and besides contiguity and precinct, 12 respecting precinct lines? 13 14 A. Off the top of my head, no. I might be 15 misremembering one or two. But off the top of my 16 head, no. What about separating up the oil industry, 17 Ο. 18 is that a traditional districting criteria? 19 A. I'm going to answer that question from the 20 standpoint of how I, as a redistricting expert, but 21 not a New Mexico expert, would --22 I would rather you just answer my question, Ο. 23 though. 24 A. I'm going to answer the question. I'm 25 explaining to you the perspective that I'm going to

answer the question from.

So I'm a redistricting expert. I am not an expert specifically on New Mexico or New Mexico oil industry. So most states do not have the -- the oil extractive industry is not an a significant part of most the state's economy. And it's probably a significant part of very few states, New Mexico being one of them.

9 And so no, oil industry considerations 10 are not traditional districting considerations across 11 the U.S. And that is the perspective from which I am 12 an expert. I am not an expert on New Mexico.

Q. Yeah, I'm not asking you about New Mexico. IA I mean asking you as an expert in redistricting. And you were actually an expert in the Rucho v. -- or is it Common Cause v. Rucho? -- that case, right?

A. Yes.

Q. And have you read Justice Kagan -- have youread the opinion by the majority and Justice Kagan?

A. I'm not sure I've read the whole thing. I'mobviously familiar with it.

Q. Okay. And both the majority opinion and
Justice Kagan discuss traditional redistricting
criteria quite often in that opinion, right?

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A. I'm happy to take your word for it. I'm not

affirming or denying that. But I'm happy to take your 1 2 word for it. 3 Q. Okay. And I think it was justice Roberts who wrote the opinion. Do you know -- and since you 4 5 were involved in that case, do you know if they б considered oil well -- splitting the oil industry as a 7 traditional districting criteria? I don't specifically know, but since the oil 8 Α. 9 extraction industry is not a significant industry in 10 North Carolina, I would be pretty doubtful about that. Q. With it, in fact, you've never programmed 11 12 your algorithm to respect any -- or to split up any 13 industry, have you? 14 THE WITNESS: I'm going to -- can I ask the 15 Court to repeat the question? 16 THE COURT: I guess you could. 17 Will you repeat. 18 MR. WILLIAMS: You're in Lovington today, Dr. Chen. 19 BY MS. DIRAGO: 20 21 I will repeat. You can ask me to repeat the Q. 22 question. 23 Α. Okay. I'll ask you the question, the repeat 24 it. 25 Okay. In all of your simulations that Q.

you've programmed you never been asked to split up an
 industry before, right?

3 I'm going to be as brief as I can. Α. You asked me this question in deposition, and I think I 4 5 answered it in much more detail to say that, while б industry is very broad term, and certainly ways in 7 which -- and the example that gave when you asked me the same question in deposition, was I've certainly be 8 asked to say protect incumbent in congressional -- or 9 sorry, in some kind of legislative simulations. 10

And to the extent that you can consider politicians an industry, for example, or a profession, the term "industry" is just so broad, that there probably would be some considerations that fall within what you're asking about.

So I'm going to stick with the way I answered it in deposition, but I'm not going to waste your time by going into all that detail again.

Q. I appreciate that. Okay. So you've never before been given the instruction to spread out oil wells, have you, before this case?

A. I'm going to first point out that my -- the instructions that were given to me were not to point out oil wells. It was a bit more specific than that. So I'm just going to start with that caveat.

1 Ο. So is that a no? 2 Okay. I'm going to give that caveat. Α. I'11 3 answer your question. And the answer is that no, I've never -- because I've never worked as an expert in a 4 state where the oil extraction industry was a 5 б significant part of the state's economy, so no. 7 Okay. And you gave a caveat, have you ever 0. been -- and I'm going to use the exact instruction. 8 9 Have you ever been told by lawyers to make sure that no district in the state contains more than 60 percent 10 11 of the state's oil wells? 12 Α. Sorry, I'm going to ask you to repeat the 13 question. 14 This is getting hard. Have you ever been Ο. 15 told by counsel, when you're creating simulated maps, 16 to ensure that no district has more than 60 percent of the oil wells in the state? 17 18 A. Okay. Thank you for repeating it. The answer is no, same thing as before, same explanation 19 as before. I've never worked --20 21 Q. I don't need the explanation. What about 22 farms. Have you ever been told to spread out farms in 23 your maps? 24 A. Yes, same answer as before. 25 Q. Okay. Ranches?

1	A. Same answer.
2	Q. Orchards?
3	A. Same answer.
4	Q. Okay. You were an expert in Florida,
5	weren't you?
б	A. I've been an expert witness in a Florida
7	case, sure.
8	Q. Okay. But no orchards there?
9	A. Florida, I'm just I'm just trying to
10	remember what criteria I was instructed to use in
11	Florida. Florida has a very specific list of criteria
12	in their state Constitution. And I don't think
13	orchards are among the Constitutionally specified
14	criteria. Nothing relating to orchards, I don't
15	recall. But it's a very specific list of
16	constitutional criteria.
17	Q. And you wouldn't remember if you were told
18	to split up all the orchards in Florida? Is that what
19	you're saying right now?
20	A. No, my answer is no, I don't recall being
21	asked to split up orchards.
22	Q. Okay. What about crops?
23	A. Same answer.
24	Q. Chemical plants?
25	A. Same answer.

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Electrical plants? 1 0. 2 Α. Same answer. 3 Factories? Q. 4 Α. Same answer. Greenhouses? 5 Q. 6 Α. Same answer. Coal mines? 7 Ο. 8 Α. Same answer. What about gas? You weren't asked here to 9 Q. spread out the gas wells, right? 10 11 Α. That's correct. 12 Q. So defendant's counsel informed you that oil industry is -- let me just look at exactly what you 13 14 say, because I know you are exact. Paragraph 9 --Page 9, I believe. No, it's Paragraph 9. 9.F. okay. 15 16 You say: Defendants counsel informed me that due to the economic importance of the oil 17 18 production city in New Mexico, a policy consideration 19 in the state's congressional districting process was 20 to spread out the state's oil wells across multiple. 21 Is that correct? 22 Α. Yes. 23 Q. But you weren't told anything more about why 24 this was a policy consideration, right? 25 I think the sentence /EPB Late it. Α. No. Ι

1	was told that the oil industry, the oil production, or
2	the oil extraction industry is pretty economically
3	important in New Mexico. I think that's that's the
4	explanation.
5	Q. And you don't know if this is a policy
6	consideration that was used to draw SB-1, do you?
7	A. I do know.
8	Q. Oh, you do know? What is the answer?
9	A. Well, defense counsel has since informed me
10	that the legislative record supports that there was
11	discussion and advocacy for oil industry
12	considerations in the legislative process?
13	Q. But you don't know whether SB-1 was drawn
14	using that policy consideration, right?
15	A. The information defend counsel gave me is
16	that it was a consideration by legislators, by house
17	representatives and senators during the SB-1 process.
18	Q. Okay. And that was since your deposition
19	that you were informed of that?
20	A. That's correct.
21	Q. So you didn't ask when you originally got
22	that information from defendant's counsel?
23	A. I'm just going to ask you to be more precise
24	about your counsel.
25	Q. You didn't ask if that was a policy

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1 consideration that was used to draw SB-1 when 2 defendant's counsel told you to split up the oil wells 3 in New Mexico?

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A. I -- I think this is first sentence in Section F here in Paragraph 9 says what I did not at the time, which was that it was a policy consideration N congressional districting process of SB-1, and that consideration was to spread out the state's oil wells across multiple districts.

10 Q. But you didn't ask if SB-1 was indeed drawn 11 with that policy consideration, did you?

A. I don't think I asked that question. The information that I was given was here, and so I just reported that information. I don't know that I would have asked the precise question that you're posing.

Q. Okay. And defendants's counsel did not explain the connection between the importance of the aisle well industry on one hand and the spreading out of the oil wells of your maps on the ordinary person hand?

A. That's incorrect. I think defense counsel did inform me of that and I reported that in the first sentence here, in Paragraph 9.F. so I think that was the case and I think I reported that here in my report?

So I see defendant's counsel informed me 1 Ο. 2 this was a policy consideration, therefore, 3 defendant's counsel instructed me to require that no single congressional district in any computer 4 simulated plan contains more than 60 percent of the 5 oil -- the state's active oil wells. б 7 It's the middle part, it's the why that I don't see in here. And I'm asking you, did they 8 explain the connection, and we can all agree it's an 9 important industry. I don't understand why that means 10 11 you spread them out in your state? So I want to know if you asked that question. 12 I don't think I asked that question because 13 Α. 14 I think the answer was already given to me in the 15 instructions that defendant's counsel gave to me. 16 So there are two things there. I said that defendant's counsel informed me that this is a 17 18 policy consideration, that the economic importance of the oil industry was -- well, that the oil industry is 19 20 important, and that therefore there's this policy 21 consideration. And defendant's counsel obviously gave 22 membership the specific instruction that I programmed 23 into the algorithm. 24 That, therefore, begins the second 25 I think that is connection between these sentence.

two things. It was really clear to me that one thing 1 2 led to the other, that the second was the result of 3 the first thing that defense counsel told me. So I 4 think that's laid out pretty clear in this paragraph 5 in my report. б Okay. So how does one thing lead to the Ο. 7 other? A. Well, just like I said. I was informed that 8 spreading out oil wells was a policy consideration and 9 that because of that, defense counsel there have 10 11 instructed me to program my algorithm with this particular criteria. 12 13 Q. So that's all you know about the criteria, 14 right? 15 A. Exactly what I've written in my report. 16 Exactly. Q. I'm still trying to figure that out. So if 17 18 you can enlighten me anytime during my cross of you, 19 please do. 20 Okay. And traditionally redistricting, people want to keep communities together, not split 21 22 them up, right? 23 A. I have no opinion on the veracity of that 24 statement. 25 Q. Haven't you written about communities of

interest in redistricting?

2 Yeah. Absolutely. When we use the phrase Α. 3 communities of interest in redistricting, we're usually referring to a process. The idea of a 4 5 community of interest is so didn't there one state to б another, from one jurisdiction to another. There is 7 no single universal definition of community of interest. Usually, when states talk about community, 8 9 or jurisdictions talk about community of interest, 10 they're talking about a process, a process of gather 11 information and testimony about communities of 12 interest.

Q. So I'm not asking you about the definition, IA I'm asking you do you typically want to spread out or Split communities of interest or do you typically want to keep them together in redistricting?

A. Same answer as before. I have no opinion
about this as just a categorical statement. I'm not
sure that it's possible to just make a categorical
statement or a generalization like that can.

21 Q. So gas introduction the pretty important in 22 New Mexico, right?

A. I have no opinion.
Q. Do you know if agriculture is?
A. I have no opinion.

1	Q. You weren't asked to spread out the
2	agriculture any crops or farms or ranches in this
3	case?
4	A. No.
5	Q. Okay. I'm going to get an exhibit.
6	MS. DIRAGO: May I approach, your Honor?
7	THE COURT: Yes.
8	BY MS. DIRAGO:
9	Q. So this is something that I printed off of
10	New Mexico Tech's hold on. I did write this down.
11	The New Mexico Bureau of Geology and Mineral
12	Resources. And this is an organization sponsored by
13	New Mexico Tech. And I'd like to direct you to the
14	sentence that starts with 67 percent.
15	And it says: 67 percent of New Mexico
16	Gas is produced in from the San Juan Basin and
17	33 percent is produced from the Permian basis.
18	95 percent of the oil is of the oil, so that was
19	gas. 95 percent of the oil is produced from the
20	Permian Basin and 5 percent of the oil is produced
21	from the San Juan Basin. Do you see that?
22	A. I see the sentences.
23	Q. Okay. There's a picture. But, again, you
24	were only asked to spread out the oil wells, which
25	were all in or 95 percent of them are all to the

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Permian Basin, correct?

2	A. Your statement there does not follow from
3	the text that you just read. Text that you just read
4	on this page and I'm going to answer your question,
5	but I'm going to first start by staying that you just
6	put this document in front offense me. I don't know
7	what it is. I don't know you know you've told me
8	whether it comes from, but I've not reviewed it. I
9	don't know what data it's based on.
10	With all those caveats out of the way.
11	You just read a sentence, and the sentence you read
12	does not support the statement that you just made.
13	The sentence you read
14	Q. Did I had misread it?
15	MS. DIRAGO: Can he answer, your Honor?
16	THE COURT: What did you say then?
17	MS. DIRAGO: I said, "Did I misread it?"
18	THE COURT: Okay.
19	THE WITNESS: Okay. Thank you, your Honor.
20	A. Okay. The sentence that you just read says:
21	95 percent of the oil is produced from the Permian
22	Basin and 5 percent of the oil is introduced from the
23	San Juan Basin.
24	Now, I'm not verifying the accuracy of
25	any of those numbers. But that statement is different

than the statement that you just made in your 1 2 question, which is about the wells themselves and not the oil. So you just conflated those two things. You 3 read the sentence, but then you interpreted it in a 4 meaning that is clearly different than the words owner 5 б this page. So I'm taking issue with the premise of 7 your question because it's clearly contradicted bill the text that you just reads on here. 8

9 Q. Okay. I understand what you're saying. So 10 you're saying that potentially, more of the wells are 11 not in the southeast -- the majority of the wells 12 within in the southeast corner of New Mexico?

A. I did not say that. I just said that the
words that you read off the text of this page are
different than the premise of the question that you
just asked.

Q. Do you know where the oil wells are inNew Mexico?

19 A. I turned over data about where the oil wells 20 are in New Mexico. I obviously used that information. 21 That information was inputted into my computer 22 simulation algorithm. And I turned over all that 23 information. There are obviously a lot of oil wells, 24 I think over 25,000 of them, active oil wells in 25 New Mexico. I'm not going to be able to tell you the

1	locations of all of them sit over here right now, but
2	I turned over all of that data.
3	Q. Did you ever look?
4	A. Of course I looked at my own data. Like I
5	said, there are 25,000 of them. But I reported the
6	locations of them with respect to the different parts
7	of New Mexico.
8	Q. But you just don't remember; is that what
9	you're saying?
10	A. Well, there are 25,000 of them. I mean, I
11	can't sit up here and tell you the locations of all 25
12	thousands or so of the active oil wells. There are a
13	lot of them.
14	Q. Do you know generally?
15	A. They are located in different parts of
16	New Mexico. That's what I can generally tell you.
17	Q. You didn't look to see if they were
18	clustered initial in particular?
19	A. I'm sure they might be, but, I mean, I'm not
20	going to be able to comprehensively characterize to
21	you the locations of all of them. The point is, it's
22	in the data. I've turned over all of the data.
23	Q. So it was important to you when you were
24	asked to spread out the oil wells, where they were
25	located?

1 Α. Oh, that was --2 MR. WILLIAMS: Form, foundation, misstates 3 the testimony, misstates the exhibit. THE COURT: What are you trying to get him 4 5 to answer. I want to know if it was б MS. DIRAGO: 7 important to him, to his analysis. Okay. Was it important to you 8 THE COURT: 9 to know where the oil wells were for your analysis at 10 the time you performed it? 11 THE WITNESS: You're asking me to answer 12 that question now, your Honor? 13 THE COURT: Yes. 14 THE WITNESS: Okay. Thank you, your Honor. 15 Yes. And I did have that precise data on Α. 16 the location of all the oil wells. I used that 17 precise location data on all the oil wells. And I 18 inputted that into the algorithm. So of course it was important. That's why I used that data. 19 It was 20 necessary in order for me to incorporate this 21 criteria. And if you saw the majority of the oil wells 22 Ο. 23 were located in the southeast corner and that counsel 24 asked you to make sure that no district contains more than 60 percent of the oil wells, would that raise 25

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alarm bells to you?

A. No. As long as I have accurate location of the -- of all the oil wells. The important thing to me and the only thing that would raise alarm bells is if it's not, sway, a well defined criteria and if I can't understand that there's not data on.

I looked at the data, I looked at data on all the oil wells, I incorporated that data, and that's how I incorporated this consideration.

Q. So if you looked at your oil well data and you saw that the majority of oil wells were in the southeast corner, would that matter to your results that you were then asked that no district contain more than 60 percent of the oil wells in your maps?

A. No. The criterion works just the same. I mean, the point is, that the data is being incorporated into the algorithm. That's what's important to me, is to get it right.

Q. I'm asking though if that matters to your
analysis in creating neutral and blind maps?
A. I'm sticking with the same answer. It's no.

MS. DIRAGO: So I have -- can I approach? THE COURT: Yes.

BY MS. DIRAGO:

2 Q. Okay. So these were actually printed out 3 from the website that you say you got the oil and well data from. Do you recognize these at all? 4 5 I don't, but I --Α. 6 Ο. I'm not sure that's now how you viewed the 7 data when you did view it? Yeah. I mean, as I explained in my report, 8 Α. in 9.F, Paragraph 9.F, I just downloaded the 9 10 geospatial data. So this is a visual -- this looks like a visual map, you're representing it to me --11 you're representing to me that it comes from the OCD 12 website. I'm not sure I would have been interested in 13 14 looking at these sort of visual maps. I was 15 interested in downloading the precise location data. Okay. And the instruction to make sure that 16 0. no district contains more than 60 percent of the oil 17 18 wells, looking at this map, it would have the effect of cracking the southeast corner of New Mexico, right? 19 20 Α. Yeah, I have no opinion on that. Do you see that most of -- and there are 21 Ο. 22 There's one that's oil wells that one that are two. 23 gas wells. So I'm looking at the one that shows the 24 oil wells, and you can see that by the pink square. 25 And it says 76.1k. And then, if you look, most of

those oil wells are concentrated in the southeast 1 2 corner of New Mexico. Do you see that? 3 I'm not sure -- you just put this map in Α. front of me. I don't know how this map was created, I 4 don't know who created it, I don't know what this map 5 б is representing. You just put this in front of me. 7 And I don't see any documentation. I don't know what data it's based on. I don't have any context for 8 interpreting this map. So I'm... 9 10 Q. So if it were true that the majority of the 11 oil wells were in the southeast corner of New Mexico 12 and you were -- you programmed your algorithm to ensure that no district has more than 60 percent of 13 14 the oil wells in that district, would that have the 15 effect of cracking the southeast corner of New Mexico 16 in every single one of your 1,000 maps? I have no opinion. 17 Α. 18 Really? You're an expert in simulation 0. analysis and redistricting, and you don't know whether 19 20 that criterion would have the effect of splitting the 21 southeast corner of New Mexico in every single one of 22 your 1,000 maps? A. All right. That's a different question. 23 24 You just asked a different question. You asked me 25 about splitting. And I mean, certainly, if it were

the case that a significant portion of oil wells 1 2 /KWR-R in the Permian Basin, then sure, you'd have to 3 draw lines that often do go through the Southwest Not always. And it would differ in how it --4 corner. 5 how the line the drawn. But sure, I could see that б that's a tendency. 7 But to be clear, the question you just asked is different from your previous question. 8 9 Q. Okay. Do you know whether there's a community of interest in the southeast corner of 10 11 New Mexico? 12 Α. I have no opinion. Q. So it was and relevant to your work here to 13 14 figure out if there was a community of interest in that southeast corner of New Mexico? 15 16 A. No, that was not a question that was put forward to me. 17 18 Q. Dr. Chen, you were named a defender of democracy my Common Cause and you didn't want -- you 19 weren't curious to see if the instructions that 20 21 lawyers gave you were cracking a community of 22 interest? 23 A. Same answer. Q. Which is what? No? 24 25 Α. I was not instructed to answer that

1	question, so I did not analyze that question.
2	Identify got no opinion.
3	Q. So you don't know if that instruction
4	affected your results at all?
5	A. Which instruction are you talking about?
6	Q. The 60 percent oil well instruction.
7	A. Okay. The 60 percent oil well instruction
8	was incorporated into my algorithm. And so of course,
9	of course it influenced the maps that were drawn. And
10	specifically, I went and looked through all of the
11	maps, all 1,000 of the maps that the algorithm
12	produced, and I saw that yes, it did have in fact,
13	have the affect of treading out New Mexico's oil wells
14	across multiple districts.
15	Q. And does that affect your conclusion?
16	A. Of course that affected my conclusion. That
17	was the basis of my conclusion. The simulations are
18	the basis of my comparisons of comparing the
19	simulations with the SB-1 plan. And that's very much
20	what I opined about throughout my report.
21	Q. Okay. So sitting here today, as an expert
22	in this case, you cannot tell the Court how SB-1 would
23	compare to 1,000 simulated maps that were not drawn
24	with the 60 percent oil well consideration?
25	A. You're asking me about a different

1	hypothetical analysis, which I did not do because I
2	was not asked to answer that question, and so I have
3	no opinion.
4	Q. So you cannot tell the Court how SB-1 would
5	fare to maps where the oil well consideration was not
6	baked in?
7	MR. WILLIAMS: Objection. That's
8	argumentative, your Honor. I don't think Dr. Chen
9	has testified that anything was baked in.
10	THE COURT: What?
11	MR. WILLIAMS: She described it as "baked
12	in." I'm not sure I understand what that means. It
13	seems awfully argumentative.
14	THE COURT: Yeah, I think that that's maybe
15	a colloquialism that you could explain better.
16	MS. DIRAGO: Okay.
17	BY MS. DIRAGO:
18	Q. You cannot tell the Court house SB-1 would
19	compare to 1,000 maps that were not drawn with the
20	60 percent oil well consideration?
21	A. Same answer as before. I was not asked to
22	do that analysis, so I didn't answer that question. I
23	have no opinion.
24	Q. Okay. So you thus cannot tell the Court how
25	likely it would be for a partisan blind map maker to

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create a map that split the southeast corner of 1 2 New Mexico into three counties when that map maker was 3 not instructed to adhere to that 60 percent rule? 4 Α. So if I'm understanding you question 5 correctly, you're asking me to consider a map drawing process that ignores the oil well consideration. б And 7 so I've got the same answer, I was not asked to answer that, did not do that analysis, and therefore have no 8 9 opinion. 10 Is that why you didn't give an opinion here Ο. 11 about whether SB-1 gerrymandered? 12 Is what the reason why? Α. 13 0. Because you didn't look at how the map says 14 against 1,000 maps that were not drawn with that oil 15 well consideration, we've already testified is not 16 traditional redistricting criteria? Okay. The reason I did not give an opinion 17 Α. 18 about partisan gerrymandering, is I was not asking to analyze that question. Therefore, I didn't analyze it 19 20 and therefore, I have no opinion. 21 Q. But you're an expert in gerrymandering, 22 right? 23 A. Absolutely. 24 Q. And you've given opinions in many cases 25 before, whether a map was gerrymandered or not?

1	A. Yes.
2	Q. And, you know how to look for indications of
3	a gerrymander?
4	A. In general, I do. I'm not saying that I
5	could have done it in every specific spans, but
б	obviously, that is within my expertise.
7	Q. But you didn't do it here?
8	A. I wasn't asked to answer that question. I
9	didn't analyze it. I have no opinion.
10	Q. So despite the oil instruction, you say that
11	no county in your 1,000 simulated maps is split for
12	the oil well consideration, right?
13	A. There are no county splits that are caused
14	by that consideration. In other words, there are
15	reasons why counties do have to be split in New Mexico
16	congressional maps. They have to be split for equal
17	population reasons. There are the Zuni and the
18	Mescalero considerations that I explained earlier this
19	morning. But there are not additional splits that are
20	caused by the oil the oil wells consideration.
21	Q. Did you know none of your maps split
22	Lea County?
23	A. Yes.
24	Q. So then Lea County does not have to be split
25	to respect that 60 percent oil well consideration?

It's clearly quite possible to draw a county 1 Α. 2 that does not split Lea -- that does not split Leann 3 still abides by the 60 percent -- the 60 percent oil well rule. I'm not saying that it couldn't happen. 4 5 But I didn't see it happen in the computer б simulations. But I'm not ruling out the possibility 7 of that happening. Q. Right. So I just asked you that it's not 8 9 necessary. And so I think you created 1,000 maps but 10 didn't split Lea County, so it's clearly not 11 necessary, right? 12 Α. Yeah. It clearly possible to draw a map 13 that doesn't split Lea. 14 MS. DIRAGO: Can I approach, your Honor? 15 THE COURT: Yes. 16 BY MS. DIRAGO: So Lea County was split by SB-1, right? 17 Ο. 18 Yes. Α. But Lea County did not have to be split for 19 Q. 20 population reasons, right? 21 I have no opinion on that. Α. Well, none of your maps split Lea County, 22 Ο. 23 and you had actually very tight population deviations. 24 So clearly, Lea didn't have to be split for those 25 reasons?

No, no, no, no. You asked me a question 1 Α. 2 regarding the intents or the policy goals behind the 3 drawing of SB-1. And I don't have an opinion as to that particular question. You're asking me about 4 5 whether Lea was split or not split for population or б equality reasons. Again, I have no opinion about 7 that. I can only tell you that, yes, Lea County is split. I cannot tell you why because I did not 8 analyze that question, and so that's why I have no 9 10 opinion on your question. 11 Q. Okay. I don't know if I misspoke or if you 12 misheard. But what I'm asking you is that it was not 13 necessary to split Lea County to account for 14 population equity. 15 A. Well, in general, when you're drawing a 16 New Mexico congressional plan, you are going to have 17 to split a few counties. It never has to be any 18 particular county. It doesn't have to be lady county, it doesn't have to be Roosevelt. But there are going 19 20 to have to be some counties that one has to split for 21 population equality reasons in general. So, general, no opinion. 22 23 Q. Yeah, and there's a lot of them that were 24 split southeast corner. Do you see that? 25 I don't know what you mean by "oh lot." Α. Ι

1	mean, I'm happy to tell you what counties were split.
2	Q. So Lea County did not have to be split in
3	order to respect the Indian reservation conversations,
4	were they?
5	A. There were no Indian reservation
6	considerations in Lea County. Those consideration
7	were in McKinley and Otero as well as San Juan County.
8	So there are no Indian reservation considerations in
9	Lea County.
10	Q. So that a no?
11	A. Yeah, there were no Indian reservation
12	considerations in Lea County, so no, there's none that
13	are relevant.
14	Q. You're going to be here a very long time if
15	you add you know, you don't have to add all that
16	for me. I'm just asking straightforward questions?
17	MR. WILLIAMS: Objection. That's not a
18	question.
19	THE COURT: If you have an issue with how
20	he's answering, address the Court.
21	MS. DIRAGO: Okay.
22	BY MS. DIRAGO:
23	Q. Speaking of population deviations, I think
24	you wrote a 2013 paper called "Unintentional
25	Gerrymandering," a similar title to that. Do you know

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1 what I'm speaking of? 2 I know what you're talking about. Α. Yeah. 3 And you authored it with Dr. Rodden? Ο. 4 Α. Yes. What population deviation did you allow on 5 Q. 6 that paper? 7 I don't remember the precise population Α. deviation. I'm sure there was some deviation of some 8 9 kind that was allowed. I don't remember the precise 10 threshold in that paper, I was not even trying to 11 create valid congressional planning, where your 12 New Mexico or any other state. And so I was not really that interested in adhering to a strict 13 14 population equality. So I definitely remember it was not a zero deviation. 15 16 Was it 5 percent? Ο. I don't specifically remember. I'm not 17 Α. 18 going to dispute that. I'm happy to take your representation for it. But like I said, I wasn't 19 20 trying to create valid congressional plans for 21 New Mexico or valid plans for any other state. So 22 5 percent would sound about right. 23 Q. Okay. And you testified earlier that -- you 24 testified, I believe, that all of Lea -- well, let me 25 ask you this. In your simulation maps, could all of

Lea and all of Eddy be in the same district? 1 2 A. You're not going to have all of Leann all of 3 Eddy. There certainly are some maps that have, say, all of Lea County and parts of Eddy County together in 4 5 the same districts. But you're not going to have all of both of those counties. б 7 Why is that? Ο. There might be a variety of reasons. But 8 Α. certainly the 60 percent oil wells criterion is one 9 10 reason why that's happening. 11 Q. So I'd like you to look at Page 22. Yeah, 12 we'll do 22 first. So every one of those gray circles is 13 14 one of your simulation maps, right? A. Not quite. 15 16 Okay. Explain it to me. Ο. Every gray circle represents a district from 17 Α. 18 one through 1,000 computer simulated maps. So on this figure, you'll actually see a total of 3,000 gray 19 20 circles. Because each of the 1,000 maps that is three 21 districts. 22 Q. Got it. Okay. Thank you. 23 So I do see -- so what is the percentages on the bottom there? 24 25 You're asking about the horizontal axis? Α.

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1	Q. Yes.
2	A. Okay. That the district's Republican
3	two-party share of registered voters.
4	Q. Okay. What does the 50 percent mark
5	indicate?
6	A. That is a point at which a district has the
7	same number of Republican as Democratic registered
8	voters.
9	Q. Okay. And so the 48 percent would be 48
10	percent Democrat?
11	A. No. The 48 percent remember, the
12	horizontal axis refers to the Republican two-party
13	share of registered voters. So if there's a district
14	at 48 percent, that means that 48 percent of the
15	two-party share of the two-party registered voters
16	are Republican.
17	Q. Okay. Can you look at your map on Page 18.
18	Not a map, I'm sorry. Chart.
19	A. Okay
20	Q. Okay. And what does the 50 percent mark
21	mean here?
22	A. It's the same idea, but this is a different
23	measure of partisanship. So the horizontal axis here
24	refers to the district's Republican Performance Index,
25	which I described earlier this morning. And so

50 percent here is referring to a district that has an 1 2 even number or the same number of votes for the 3 Republican and Democratic candidates across all the various statewide elections that are used in the 4 5 performance index. Q. Okay. And so here, does the 48 mean 48 б 7 percent RPI? It means that 48 percent Republican 8 Α. 9 Performance Index. 10 Okay. So that would be the same as 52 0. 11 percent Democratic DPI? 12 Α. Well, you just throughout that term DPI. I don't know what you're referring to. I did not use 13 14 the term DPI, I don't believe. I'm always measuring 15 districts in terms of the Republican Performance 16 Index. Okay. Fair enough. That's fine. So I'm 17 0. 18 looking at the top rectangle-ish blob of gray circles. 19 Are there 1,000 circles there? 20 Α. Yeah, there are a thousand gray circles. 21 Okay. How many do you see that are both Q. 22 50 percent, roughly? 23 A. It's a pretty small fraction. It looks like 24 it's -- I couldn't real count up the number, but it's a pretty small fraction. 25

1	Q. Okay. So a very large majority of the
2	districts in your 1,000 maps sorry. A very large
3	majority of District 2 in your 1,000 maps are more
4	Democratic than Republican?
5	A. Not quite. Not quite. That's not how you
б	interpret this. Because remember I explained this
7	on direct. What happened this is comparing in the top
8	row of this figure, it's the most Republican district
9	within each plan. It is not necessarily CD-2. It's
10	not necessarily the southern district. It is simply
11	the most Republican district within each plan,
12	wherever that district is.
13	Q. Okay. So if you take the to be blob, the
14	middle blob and the bottom blob out of that's 3,000
15	circles, right, if you add all the circles up? I
16	think you said that.
17	A. Yes.
18	Q. Okay. So you take all of these. There is a
19	very small portion of your 1,000 maps that had one
20	district, at least one district that was Republican
21	leaning?
22	A. There was a very small I'm just going to
23	be more precise.
24	Q. That's okay.
25	A. There's a very small number of the simulated

maps that have one district that is above a 50 percent
 Republican Performance Index.

Q. Okay. So the very, very large majority of your maps had through districts that leaned -- where all three districts leaned Democrat?

A. Same caveat again. I'm going to state it more precisely. I mean, clearly most of these districts are below 50 percent, in terms of the Republican Performance Index. So certainly, the vast majority of these plans, you've got three districts with the Republican Performance Index is under 50 percent.

Q. Okay. And so you compared the SB-1 districts to all of these districts, wherein the large majority of them were Democratic? That's what the red star is?

A. Sure. Within the red stars, I'm comparing the SB-1's -- is the SB-1's plans districts to the computer simulated plans districts in terms of their partisanship. And obviously we've been describing the partisanship of those districts.

Q. Okay. So SB-1 compared to 1,000 maps where a larger majority of them were -- drew three districts that were Democratic compared to those SB-1 is not an outlier?

Sure. I mean, I'm obviously laying out the 1 Α. 2 comparisons here, and they're not -- none of the three 3 districts are an outlier. Well, I'm trying to get to your baseline 4 0. 5 So the baseline is the three gray blobs. here. 6 Α. I'm not sure what you mean by baseline. I'm 7 just going to put it my own words. I am comparing each of the congressional districts in the SB-1 plan 8 to the individual districts in the computer simulated 9 10 plans, which, as you noted, the gray circles. 11 Q. Okay. And I guess I'm just noting that the 12 large majority of your maps have three districts that are all Democratic. 13 14 A. And I'm -- you know, I'm just going to be 15 more precise. I'm not disputing that 16 characterization, but I'm not describing districts as either Democratic or Republican. 17 18 I can them in terms of their precise Republican Performance Index, and obviously the vast 19 20 majority of these are under a 50 percent Republican 21 Performance Index. 22 Okay. So in your deposition, you said that Ο. 23 you had an article published in the California Law 24 Review, and that it was peer reviewed, correct? 25 Α. Yeah. I said that in deposition. I went

1 back and checked. California Law Review is not peer 2 reviewed. 3 Okay. And the only reason you checked is Ο. because I told you I went to the University of 4 5 California and I didn't remember that journal being peer reviewed, right? б 7 No. You asked me a question, I went back Α. and checked, no, it's not peer-reviewed journal. 8 9 Okay. I agree, that's fair. Ο. 10 My computer died. Hold on just a minute 11 please. 12 My daughter wants Starbucks. Should I order it for her? I don't think so. 13 14 Okay. So you testified that the 15 parameters -- hold on a minute. 16 Right, so I think before we went to 11, you were testifying that the criteria that you use in 17 18 your maps can be -- oh, that criteria that's not explicitly partisan on its face can still have 19 20 partisan implications; is that correct? 21 I believe what I testified was that you can Α. 22 have a criterion that is not partisan, that is not 23 partisanship, but the application of many such none 24 partisan criterion can certainly have partisan 25 effects.

1	Q. So to determine whether a criterion is
2	partisan, does the intent of the criterion matter to
3	you?
4	A. I just said partisan effects, so that is
5	just about effects. I mean, that phrase encapsulates
6	what I meant by partisan effects.
7	Q. Okay. So you don't in your analysis, you
8	don't care what the intent of the criterion was?
9	A. I'm not saying I do care or don't care. I
10	was not asked to analyze anything regarding intent,
11	and therefore, I have no opinion.
12	Q. So you're not saying you do care or you
13	don't care, so can you answer that? Can you care or
14	do you not care?
15	A. Well, I can certainly answer that with
16	respect to the questions that were posed in front of
17	me, that were posed to me by counsel, I was not asked
18	to analyze intent. Therefore, I have no opinion about
19	intent. And in that narrow sense, you could say I
20	don't care about intent because it was not necessary
21	to answering the questions that were posed to me.
22	Q. Okay. I understand now. What I mean is the
23	intent of the criterion, what the criterion was
24	intended to do.
25	A. Yeah, I don't I don't even I'm not

sure I really understand. When you say the intent of 1 2 the criterion, I mean, the criterion is not an animate 3 object. It's not an animate person, it can't have 4 intent. People have intent. So I'm not sure the 5 question makes sense to me. б Q. Okay. How about the people who designed the 7 criterion, what their intent? Does that matter to you in your analysis? 8 9 Sure. I was not asked to analyze that, Α. therefore, I have no opinion. And from that 10 11 perspective, I was not trying to answer that question, 12 so I did not -- you know, I was not interested in 13 answering that question. 14 I mean, you are an expert in gerrymandering 0. 15 and I think that's a fair thing to think about --16 well, okay. That's not a question. Okay. So if you code into your 17 18 simulation a parameter that was articulated only by 19 those accused of gerrymandering, having no grounding 20 in the state's history or common accepted 21 redistricting practice, what would the maps, the 22 simulation -- what would the maps tell the Court. 23 Α. Okay. That was a really long question. 24 Q. Yeah, it was. 25 I'm just -- I guess -- I mean, let's just Α.

try -- you know, if I could ask you to read it back 1 2 slowly. Q. So if you code into your simulation a 3 parameter that articulated on the by those accused of 4 5 gerrymandering, what would those simulated maps tell б the Court? I mean, if you want to object, 7 MS. DIRAGO: you can object. Giving faces is probably not 8 9 appropriate. 10 A. Okay. I'm sorry about this. I'm just going 11 to ask you to repeat it one more time. That was 12 perfect speed. But just need to make sure I'm hearing 13 all the words, just because it's a long question. 14 O. I understand. It's fine. And since it's 15 written down, it's totally easy for me. 16 Okay. If you code into your simulation -- start over. 17 18 If you code into your simulation criteria that was articulated only by those accused of 19 20 gerrymander what would the maps tell the Court? 21 Okay. I think I got all the question. Α. I 22 think I heard the question. 23 So my answer is that it's not going to change my opinion. And in general, I have no opinion 24 at all about what -- about how the Court interprets my 25

work. My job is just to accurately report my statistical analysis, my empirical analysis, just to report the science. How that's interpreted by the Court is not -- I am disinterested about that question. So it is just not something I think about, and so I have no opinion.

But in general, I'm answering the first part of your question by saying that that does not change my empirical analysis, it doesn't change the opinions that I've expressed.

So, Dr. Chen, your speaks a lot about 11 0. partisan blind algorithm, partisan blind criteria, 12 13 partisan blind maps. And I guess what I'm asking you 14 is that if you're using criterion that actually had 15 the -- that was designed to have the intent to 16 gerrymander a map, isn't that tainting all of your simulated maps then so, that every one of your 1,000 17 18 maps are also gerrymanders?

A. Yeah. I have no opinion on the premises of
your question regarding, say, map drawer intent. I
just have to opinion about that.

But I'm sticking with my name answer. My job is to understand an empirical question that's been put forward to me. And here, the empirical question was, compare the SB-1 plan to maps that

follow these particular criteria. My job is to make 1 2 sure I can understand those criteria. My job is not to try to go understand the intent of somebody that 3 hypothetically may have proffered or may have proposed 4 5 to criteria. My job is just to answer scientific б questions and to answer what I found. And that's it. 7 I have no more minutes beyond just me trying to accurately report was the scientific answer was. 8

9 Q. So as long as -- as long as all your 10 simulated maps are -- split up the southeast corner, 11 SB-1 is not an outlier?

A. Yeah, no, that just not accurate. I'm
just -- I mean, I'm happy to restate what I just said,
but I think you know what I just said, so --

Q. I do. I thought that you testified that the oil well constraint did split up the southeast corner of New Mexico.

18 A. Sure. It -- I think -- I've -- I've 19 explained that, yeah, in my -- actually, most of these 20 maps, certainly there's going to be a line that's 21 drawn, and very often, it's drawn between Lea and Eddy 22 County.

Q. Okay. So when you come paper SB-1 to all maps that also split up the southeast corner, then it's not an outlier.

1 Isn't that what your ultimate conclusion 2 is in this case? 3 That's not my ultimate conclusion, but Α. certainly your -- it's perfectly fine to describe the 4 5 simulated maps as splitting up Lea and Eddy County most of the time. I mean, I've said that's an б 7 accurate characterization. Obviously, my opinion is not just that. But certainly, that's perfectly fine 8 9 to describe it that way. 10 Q. Okay. So you don't compare SB-1 to any maps 11 that didn't split up the southeast corner of 12 New Mexico? 13 Α. No, I mean, I've said that yeah, the maps 14 certainly have that characteristic of most of the time 15 placing Lea and Eddy County into a different district. 16 So sure, that is an accurate characterization of the 17 simulations. That's not my ultimate conclusion. My 18 ultimate conclusion is a little bit -- you know, is a little bit broader, is a little bit more extensive 19 20 than just that. 21 So that's why I said it's not an 22 accurate -- it's not a complete and accurate 23 characterization. 24 Q. So many if the Court wanted to know how does 25 SB-1 fare to 1,000 maps that are not all told to split

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up the southeast corner, you couldn't answer that 1 2 question? I did not -- I did not tell the maps split 3 Α. up the southeast corner. I instructed the maps to 4 5 obviously follow to oil wells criterion, which б obviously is going to have some geographic effects with respect to Lea and Eddy County. But with respect 7 to an alternative set of simulations that I did not 8 conduct, I have no opinion. 9 10 Q. So Lea and Eddy County are in the Southeast 11 corner of New Mexico, right? 12 Α. Sure. Okay. So I -- am I wrong, didn't all of 13 Ο. 14 your maps split up Lea and Eddy County? Maybe not 15 fully, but to some degree? In all of your maps, Lea 16 and Eddy County, the entire Lea and Eddy County could not be in the same district, right? 17 18 That is accurate. Lea and Eddy County are Α. not fully within the same district. 19 20 Ο. Okay. So if the Court wanted to know how does SB-1 fare against maps that are not all told to 21 split up Lea and Eddy County, you cannot answer that 22 23 question? 24 A. You used the phrase "all told," okay. And 25 that's what I'm taking issue with.

1	Q. Okay. That's the result of your
2	instruction.
3	A. That's fine. Okay. So that's the effect,
4	is what you're describing. They were not told to
5	split up any particular county. To be clear.
6	Q. Okay.
7	A. So you're then asking about sure, then
8	you're asking about a different set of hypothetical
9	analysis that I didn't conduct. And so I have no
10	opinion.
11	Q. Do you have an opinion whether that could be
12	actually an important question to answer here?
13	A. I have no opinion.
14	Q. Okay. I might be almost done. I've got a
15	lot of notes, so just one minute, but I think I am
16	done.
17	MS. DIRAGO: Your Honor, I would like to
18	renew our motion to exclude Dr. Chen's testimony as
19	not being helpful to the issue that we're dealing
20	with here. Because all his maps
21	THE COURT: Your motion from previous?
22	MS. DIRAGO: I'm sorry, yes, yes.
23	THE COURT: Pretrial motion?
24	MS. DIRAGO: Yes. And I believe we said
25	earlier, this is yesterday, that we said that we

1 would revisit it after requesting Dr. Chen.

2 THE COURT: Okay. Any further argument on 3 it?

MS. DIRAGO: Well, I want to point out that 4 5 as Dr. Chen testified shall everyone one of his 1,000 б maps did not put Lea and Eddy County in the same 7 district. And so if you're comparing SB-1 to all those maps, it's not useful. It doesn't help you 8 9 determine whether SB-1 really an outlier of all maps 10 that could be drawn in New Mexico with nonpartisan 11 intent.

THE COURT: Mr. Williams.

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MR. WILLIAMS: Your Honor, ultimately the plaintiffs' motion for conclude Dr. Chen is based upon the notion that the instruction 9.F to divide the oil and gas interests is a partisan criteria.

We have presented evident in the court, based on the legislative record that it is not a partisan instruction, that it was a policy that was considered and sad advocated for (inaudible) by the New Mexico Legislature.

There is a question of fact before the Court. The Court is going to have to make a decision on that. But there is no ground for excluding Dr. Chen for following the policy consideration.

THE COURT: Any final word?
MS. DIRAGO: I just don't think it's helpful
to you, and that's the standard that he has to
follow.
THE COURT: All right. I understand your
position, and I'm sure you'll argue that, but I don't
think that that excludes the testimony of Dr. Chen.
I think that he's an experts, which you agreed he is,
and you did not object to his report when it came in.
And so you can make argument as to the weight of his
testimony, but I'm not going to exclude his
testimony.
MS. DIRAGO: Okay. And I have no further
questions then.
THE COURT: Do you have how much redirect
do you have?
MR. WILLIAMS: I have one question.
THE COURT: Okay.
MR. WILLIAMS: Actually, I just not true.
It is one question.
THE COURT: Okay.
REDIRECT EXAMINATION
BY MR. WILLIAMS:
Q. Dr. Chen, I heard plaintiffs' counsel
describe you as the defender of democracy, do you

recall that? 1 2 Α. Yes. 3 Did they give you a cape? Ο. 4 Α. Unfortunately, no. 5 MR. WILLIAMS: All right. I have no further б questions. 7 THE COURT: All right. I -- hold on a minute. I might have one or two questions. 8 I wrote 9 some down during the direct and cross. Some of them 10 were answered. When you're doing the performance index, 11 you testified, and I think Mr. Trende also testified, 12 13 that you take about ten years worth of statewide 14 elections, correct? 15 THE WITNESS: Yes, your Honor. 16 THE COURT: Why do you not include district elections for how those -- the performance index? 17 18 THE WITNESS: Yes, your Honor. So in 19 general, when redistricting experts measure the 20 partisanship of district, they use statewide 21 election, because that way you're doing an apples to 22 apples comparison across the entire State of New 23 Mexico. 24 When you use district elections, whether 25 that's legislative or congressional district

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elections, that's no longer an apples to apples 1 2 comparison. It was a different race. 3 In CD-2 than it was in CD-1. So you're 4 not necessarily comparing the same strength of 5 candidates, Sam quality of con dates, same election, б circumstances. 7 THE COURT: All right. I understand. Okay. A sum will others, and I'm sure if you can answer 8 9 them. If you can't, let me know. 10 You described communities of interest as 11 a process of gathering of information. THE WITNESS: Yes, your Honor. 12 13 THE COURT: And what do you mean by that? 14 THE WITNESS: When you -- you see the phrase 15 communities of interest used in different jurisdictions, it never means the same thing in 16 different states, different jurisdictions. Every 17 18 locality, every state, every jurisdiction has a 19 different conception of their communities of 20 interest. 21 And so usually what communities of interest refers to is a process for learning about 22 23 communities of interest. 24 THE COURT: Okay. 25 THE WITNESS: So the process can involve,

for example, taking testimony, hearing from ordinary 1 2 citizens about what they believe their communities of 3 interest to be. THE COURT: So if that is a traditional 4 5 districting principle which it has been described in б other cases as being a traditional districting 7 principle, how would you run a simulation or, you know, program an algorithm to take that into effect 8 without having that information beforehand? 9 Would 10 you be able to. 11 THE WITNESS: Well, your Honor, I 12 personally, in my -- and I describe this in my 13 academic work, I don't believe that the phrase -- I'm 14 sorry, I don't believe that the phrase communities of 15 interest refers to anything specification and consistent from state to state, from jurisdiction to 16 jurisdiction. And that's exactly why you cannot 17 18 program a computer to automatically be able to define what communities of interest are in this State versus 19 20 that state, because the computer is not going out there taking testimony from ordinary people. 21 22 THE COURT: I understand. 23 THE WITNESS: The computer isn't being given 24 anything specific about communities of interest. 25 THE COURT: In your research and your work,

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have you ever seen economic base designed as a 1 2 community of interest? 3 THE WITNESS: I'm sure I've heard of that, 4 your Honor. I'm sure some people have described 5 their community of interest in the that way. б THE COURT: And then you mentioned it, 7 several times it's been asked, about nonpartisan criteria possibly having partisan effect. 8 9 THE WITNESS: Yes, your Honor. THE COURT: You mentioned race in certain 10 11 states where there's taken into consideration. THE WITNESS: Yes, your Honor. 12 13 THE COURT: And I don't know if you can 14 answer this, or may be another witness could have or 15 should have answered this. Would you agree that -or disagree that the criteria of measuring the number 16 of active oil wells, which also creates an economic 17 18 base could have a partisan effect, even though it is technically nonpartisan criteria? 19 20 THE WITNESS: Yes, your Honor, I think I testified to that this morning, in response to 21 22 Mr. Williams' question, that certainly, there are any 23 number of criteria and certainly oil wells is an 24 example of that, that are, by their nature, 25 obviously, not partisan. There's nothing inherently

partisan about oil wells. But applying those 1 2 criteria can certainly have a partisan effect. 3 THE COURT: Okay. But that's not anything that you studied or considered in your algorithm? 4 5 THE WITNESS: That's correct, your Honor. б I'm just -- I'm just noting that that is certainly a 7 possibility. I have not studied that and so I don't have any opinion beyond noting that that is a 8 9 possibility, your Honor. 10 THE COURT: Okay. And then the last thing 11 is, you did -- your are giving an opinion in this 12 case that the -- and I'll mangle it, so correct me 13 one I mangle it, that SB-1, when -- compared to the 14 1,000 maps that your algorithm generated, a 15 nonpartisan -- or that there are -- it's a 16 nonpartisan basis for its creation? 17 I mangled that pretty bad, but if you 18 can (inaudible) with that. 19 THE WITNESS: Your Honor, I'll just restate 20 that in my own words. 21 THE COURT: Okay. 22 THE WITNESS: And I do get what you're 23 getting at. I'm just going to restate that in in the 24 words that I use as an expert. 25 So I looked at the district level as

well as the plan-wide partisan characteristics of 1 2 SB-1. And the partisan characteristics of the SB-1 plan are within the normal distribution of, are 3 typical after, are within what we could normally 4 5 expect from plans that are produced by a map drawing process that adheres in the various criteria that I б was instructed to program into the algorithm. 7 So in essence, I'm testifying that it is 8 not an outlier, it's not a statistical outlier in 9 10 terms of its partisanship. 11 THE COURT: Okay. All right. That ends my questioning. 12 13 Any further questioning based on the 14 Court's questioning, Mr. Williams. 15 MR. WILLIAMS: No, your Honor. 16 MS. DIRAGO: No your Honor. THE COURT: All right. Thank you, Dr. Chen. 17 18 You may step down. 19 THE WITNESS: Thank you, your Honor. 20 THE COURT: Let's take a break. Who is 21 going to be next. 22 MS. DIRAGO: Mr. Sanderoff will be next, 23 your Honor. 24 THE COURT: Okay. All right. So let's take 25 about 15 minutes.

(Recess held from 2:54 p.m. 1 2 to 3:14 p.m.) 3 THE COURT: All right. If you'll raise your right hand. 4 Do you solemnly swear or affirm under 5 б penalty of perjury that the testimony you'll give 7 will be the truth, the whole truth and nothing but 8 the truth? 9 THE WITNESS: I do. 10 THE COURT: Thank you. Have a seat. 11 Ms. Sanchez. 12 MS. SANCHEZ: Thank you, your Honor. 13 BRIAN SANDEROFF, 14 having first been duly sworn, testified as follows: 15 DIRECT EXAMINATION 16 BY MS. SANCHEZ: Good afternoon, Mr. Sanderoff. Could you 17 Ο. 18 please introduce yourself to the Court? 19 Yes. I'm Brian Sanderoff. Α. 20 Q. And where do you live, Mr. Sanderoff? 21 I live in Albuquerque. Α. 22 How long have you lived in New Mexico, since 0. 23 when? 24 A. Fifty-two years. 25 Okay. And what did you do for a living sir? Ο.

I'm the president of Research & Polling, 1 Α. 2 Incorporated. What kind work does Research & Polling do? 3 Ο. Research & Polling is a public opinion 4 Α. demographic analysis, market research firm in 5 6 Albuquerque. We work throughout the state, providing 7 both quantitative and qualitative type research. Okay. Does Research & Polling do work in 8 Ο. 9 the area, as the name might suggest, of political 10 polling? 11 Α. Yes. 12 Q. Can you tell me generally about Research & Polling's work, and your work in that area? 13 14 Sure. Decades ago, we used to do it for Α. 15 organizations and campaigns and the like. But we 16 changed over many decades ago and do it primarily for 17 We've done all the political and election the media. 18 polls for the Albuquerque Journal for 30 some odd 19 years, since 1986. 20 We conduct public policy and election 21 polls for lots of nonprofit organizations, 22 corporations that want to stay on top of things and 23 know what the score is politically in the state. So, 24 you know, an up will thousand dollars of them. 25 Ο. Okay. Do you do any other political

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1	analysis for any other media out the let's besides the
2	Albuquerque Journal?
3	A. Yes.
4	Q. And can you give us a sense of what that
5	includes?
6	A. Sure. Well, I think for 20 some odd years,
7	I've been the political analyst, election expert as
8	they call medical on KOAT, the Albuquerque based A, B,
9	C affiliate.
10	You know, I've appeared on CNN and Fox
11	News and New York Times and LT times, just this lost
12	month, both of them talking be New Mexico politics and
13	elections.
14	Q. Okay. And do you really specialize with
15	politics and elections within the State of New Mexico?
16	A. Yes, I think so.
17	Q. As opposed to
18	A. Oh, I see what you're saying.
19	Q other states in the country?
20	A. We do work throughout the nation and quite a
21	bit in Texas. But I'd say 95 percent of our work is
22	in New Mexico.
23	Q. Okay. Okay. And in connection well, can
24	you give us an idea over all those many decades, how
25	many political polls you've oh done?

1	A. It gets into the thousands.
2	Q. Okay.
3	A. You know, we've done 2,000 polls and at
4	least half of those would be on, let's say, a public
5	policy matter.
6	Q. All right. Has Research & Polling ever been
7	the subject or recognized by any kind of /TPHABL
8	recognition for in context with its polling work?
9	A. Yes.
10	Q. Tell us about that, please.
11	A. There's a nationally regarded website could
12	538, formally owned by Nate Silver, who is a well
13	known national statistician, and now by ABC News, I
14	guess that bought them out. And so they maintain a
15	database of 500 or so polling companies nationwide.
16	And they actually track all of our accuracy of our
17	polls in the media.
18	And for this last year now, they've had
19	only four polling organizations in the nation with an
20	A plus rating, and we're one of them. So we're proud
21	of that.
22	Q. Sure, sure. Thank you. And in terms of
23	your work over that past 40 years or so in elections
24	and polling in New Mexico, has that work required you
25	to analyze or evaluate whether a district or race is

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competitive or not?

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A. Sure.

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Q. Is that something that you do all the time?

A. Yeah, for corporations and nonprofits, in
the past candidates. You see look at the election
results, and people want to know what it means, am I
in good shape, am I in bad shape, how much money to I
need to raise to win. Sure, anytime you do a poll,
the client is going to want to know what it all means.

Q. Sure. And in terms of your work for the media, for the Albuquerque Journal or for KOAT or any other media outlet that you're doing polling for, does the fact that you're preparing that for a media organization impact in any way the way you approach your analysis?

A. I think so. When you do your work for the media, and so you know your poll is going to end up, the governor's race or congressional race, on the front page, we have a great responsibility to the readers, to the candidates. Because that poll could actually have an impact on the election, fundraising and the line.

Is when it comes to our media polling,
we take it up one notch higher in terms of
methodological approaches to make sure it's as

accurate as possibly can be. Because we know we're 1 2 going to be scrutinized. 3 No one has ever questioned the results of one of our polls when they like the results, when 4 5 but they don't like the results, they go and do that. б And so we really -- and it's also good business, 7 frankly. You want your polls to be as accurate at possible. Especially those that make it into the 8 public eye. 9 10 Q. So you may have already answered this, but 11 just to be clear, does Research & Polling perform any 12 polling work or election analysis on behalf of any 13 political candidates or political parties? 14 A. No. We stopped doing that decades ago. And 15 the reason is, once we started doing the media, we 16 wanted to avoid the /PRAERPBS of a conflict of interest so that hopefully everyone will trust us. 17 18 Q. Okay. Let me shift gears just a little bit 19 and ask about your work in the area of redistricting 20 in New Mexico. 21 Can you tell me a little bit about the roll that you have played and maybe more broadly 22 23 Research & Polling, but start with the roll that you 24 have played with redistricting in New Mexico? 25 Α. Well, you're going to think I'm a will the

older than I am. But this is my fifth cycle of 1 2 redistricting for the state. 1981, '91, '01, '11, 21 years. So this is the fifth cycle for redistricting. 3 The first time I was a state government employee 4 5 assigned by the governor to work on it and with the б legislature. The our four times, Research & Polling 7 was -- actually had a contract with the state legislature to provide the professional and technical 8 services to make the whole process work, to staff the 9 10 process.

Q. Okay. So can you tell us a little bit more about what that involves, what staffing the process for legislature involves under those contractors you've had now for 30 some odd years? What are those professional and technical services, generally, that Research & Polling provides?

A. Most of it is really -- it's the center for
hardware and software to allow legislatures to draw
plans to set up the technology to provide the website
information so plans can be put on the public website.

The precinct is the building block in New Mexico for redistricting. And precincts are, one, authorized by the county commissions. And the state law provides that under certain conditions, precincts have to be split. I won't get into the details.

And so we work a year before 1 2 redistricting with all the county commission and the 3 census bureau to make sure that any precinct boundaries that the county commissions create conform 4 5 to a census block boundary so that the census bureau 6 will give us precinct-level population and racial data 7 so that the legislature, the county commissions and the city councils can all accomplish their work. 8 9 So it's a vast effort for fix the census 10 bureaus' maps or to fix the county commission precinct 11 maps so that the line conform. 12 Then, as we move closer, we are setting 13 up the software technology, the GIS systems, so that 14 when legislators make requests to have -- we honor --15 satisfy all legislative requests for redistricting 16 plans. If a legislator wants a plan drawn, we can draw it for them and give it to them. And so we have 17 18 to come up with common hardware and software issues 19 sos that other people Democrat, Republican caucuses, 20 for example, can also draw their even plans. 21 And so basically, we're setting up the 22 technology, and we're also drawing plans at 23 legislators requests, house districts, senate 24 districts, public education commission districts, 25 county commission, congressional districts and the

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1 like.

Q. Okay. All right. And when Research & Polling, you know, honest one of those requests, you get asked to process a particular plan on behalf of, you know, legislator X, what does the actual product look like that you generate? What kind of information does that contain?

Every plan that's requested by a legislator 8 Α. gets a form. Oh, and one thing I forgot to mention 9 earlier was the mapping technology. But when a plan 10 11 is drawn by us or if someone else draws a plan and submits it to us, it mass to go through a process 12 13 where we calculate the precinct level population, 14 racial statistics, partisan performance index, which 15 incumbent are paired, if any.

And it's a standard form that, then, if the legislator decides to introduce the plan, then it goes public and everybody can see it. If they decide not introduce the plan, then it just stays with the legislator. So basically providing population, racial and political data and maps, beautiful maps of all of the boundary lines of that particular plan.

Q. All right. Thank you, Mr. Sanderoff. So
within that package, you mentioned something called a
partisan performance index, and I want to ask you a

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little bit about that.

2 Can you explain for us in layman's terms 3 what a partisan performance index is?

A. Sure. It's really not complicated. So you
want to have a partisan measure, or at least
legislators do, to understand how an average Democrat
or an average Republican might perform in a given
district as you shift the boundaries and compare and
contrast of.

10 So what we do is we take all the 11 statewide raises that occurred in the State of 12 New Mexico, 2012, '14, '16, '18 and 2020. Remember we 13 were doing this for the session in '21.

And we take those raises, there are 26 of them, that we aggregated estimated precinct boundary shifts overtime, as the boundaries and the precincts changed and came up with the partisan performance index. So anybody who drew a plan and the boundaries started shifting, the numbers would start shifting on the partisan performance index.

In this index, that included 26 raises throughout the decade, we excluded any race where a candidate won by more than 20 percentage points. Winning by more than 20 percentages points became an outlier to us. If the objective was to come up with 1 something reasonable accurate, that people can count 2 on, you can average all the other raises. And we 3 excluded three raises that we were what we considered 4 outliers.

Q. Okay. And is that methodology that you just outlined for us, is that the same methodology that Research & Polling used to create its partisan performance index in 2011 and 2001 and 1991, as well?

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A. Yes.

Q. And I guess one question is, have you ever seen any need to change the way that you do the partisan performance index? Has it been pretty reliable?

14 I think so. Because again, the goal is to Α. 15 come up with something that realistic. You know, one 16 of those raises the candidate won by 29 personal point, is a well known powerful incumbent with lots of 17 18 money running against a placeholder that was just put on the ballot who didn't do anything. And that 19 20 candidate won by almost 30 points, so why include that 21 in the index.

Q. Sure, sure. Let me ask you a slightly different question from what is the partisan performance index to what is the purpose of the partisan performance index?

The purpose of the index is to /KPW*EUF 1 Α. 2 legislators a sense of partisanship of 3 competitiveness, of safety, of particular districts 4 that are drawn. So if people draw through different 5 districts, they can compare and contrast the partisan б performance index of the different -- among the 7 different districts. So for the legislature, for example, you 8 know, you have 70 house seats. You can quickly look 9 10 at the Democrat and Republican parties and performance 11 for all 70 seats and compare it to another plan that 12 another legislator may support for state house 13 districts. It's a handy way of measuring competition. 14 Q. Okay. Is it meant to necessarily predict the county some of the next election in that district 15 16 for whatever seat? It's not designed for that. And we 17 Α. 18 constantly tell the legislators, it's not designed for that. It's designed to be an average of how 26 19 20 statewide candidates' raises occurred. And so it 21 doesn't take into account the quality of the 22 candidates or incumbency or how much money they've

23 raised. Those things have to be taken into account by 24 the people who are looking at the numbers to give them 25 a better sense.

That doesn't mean that everyone doesn't 1 2 immediately think of them as predicting the outcome, 3 but that was not the intent. 4 Sure, sure. Okay. Thank you. So you've Ο. 5 already mentioned this, but just to come back around б to 2021, did Research & Polling play this same sort of 7 professional technical services role for legislature for redistricting in 2021? 8 9 Yes. Yes, from '91 -- for four cycles. Α. Okay. And in 2021, did Research & Polling 10 0. 11 have any role and connection with the work of the 12 citizens redistricting committee? 13 Α. Yes. 14 Can you tell us a little bit about what that Ο. 15 looks like? 16 Okay. The legislature and the -- I guess in Α. the session prior to redistricting past a statute to 17 18 create a citizen redistricting commission. And the citizen redistricting commission was made up of 19 20 committee members, and they traveled the state in two rounds of public hearings. And people realized, oh my 21 22 goodness, this has happened really fast that the 23 legislature passed this major undertaking. 24 And so they needed somebody to staff the 25 process. So we were still building the technology for

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the legislature. We staffed the process, went to all 1 2 the meetings, creating the technology for them to do 3 everything they wanted to do. And we took a break from the legislature during that period of July and 4 5 into October, staffing the citizens redistricting committee, we took a break from our work with the б 7 legislature, sort of to wear a different hat. And then we went back to the legislative 8 9 had once we finished our work for the citizen 10 redistricting committee. 11 Okay. Ο. 12 Α. So it was performing the same type of services for a different group. 13 14 Q. Understood. Okay. Let me ask you this. 15 Did you -- did you or Research & Polling have any role 16 in designing the map that is what we're calling SB-1, the congressional redistricting map that's at issue 17 here? 18 19 Α. No. 20 Ο. And did you have any communications with legislators about the design or the intent or the 21 effects of SB-1? 22 23 Α. No. Q. All right. And I think you mentioned 24 25 earlier that there are -- Research & Polling can

perform the task of drawing a plan upon request, but 1 2 there also may be plans that come to Research & 3 Polling that legislators may have developed without vour assistance? 4 5 That's true. Α. б Is that's something that happens? Ο. 7 That is something that happens. We still Α. have to process any plan that's going to be 8 9 introduced, whether we drew it at the request of the 10 legislator, whether some other organization drew it. 11 They have to process it through us so we get those 12 forms and those maps to make sure the populations add 13 up to the population of the state and they haven't 14 left out precincts. So people are forced to practices 15 their plans through us if they want them to be 16 introduced into the legislative process. And are there requests that come through 17 Ο. 18 Research & Polling -- is it your understanding that any requests Research & Polling gets to develop maps 19 20 or process maps, that those are treated as 21 confidential within the legislature? 22 Α. Yes. It's in our contract that we're sort 23 of an arm of the legislative council service, like 24 attorneys who are trained that we -- that anything a 25 legislator asks us stays with us. We're not even

allowed to tell legislative leadership what we might 1 2 be doing for their own members. Everybody we do works with the attorneys for legislative council service. 3 4 Ο. Okay. I want to shift gears just a little bit still in the area of redistricting, but I want to 5 б ask you about your experience testifying as an expert 7 witness. As I said it, Mr. Sanderoff, you were 8 involved in not only the redistricting process in 9 10 New Mexico back in 1991, I realize in a different roll 11 in 1981, but jumping to 1991, but did you also have some involvement in 1991 with some court action that 12 13 took place surrounding some of the redistricting in 14 the state? 15 A. Yes. 1991 was different. In 1981, New Mexico not once, but twice was found to racially 16 gerrymander by the U.S. courts. And so New Mexico was 17 18 under preclearance in 1991 and actually had to have its plan precleared by the justice department. 19 20 So we staffed the 1991 process. The house plan was precleared by the justice department. 21 22 But the senate plan -- the state senate plan was not. 23 And so the justice department basically came back to 24 New Mexico said, "We want you to create two minority 25 districts in Southeastern New Mexico."

So we worked with the legislature to 1 2 come up with something that would satisfy the justice 3 department, and then they sent me back to Washington, 4 D.C. to work with the justice department and get their 5 preclearance. And then once getting it precleared, б the legislature passed that plan. 7 So it changed the face of the state senate in Southeastern New Mexico, and Research & 8 Polling was an active participant in helping the 9 legislature with the justice department. 10 11 Q. Okay. All right. Thank you. 12 Outside of that experience, have you 13 testified as an expert witness in court in connection 14 with redistricting litigation? 15 A. Yes. In the 2001, in the 2011 case, just like this. That one was a little given, because the 16 governor and the legislature couldn't come to terms 17 18 with the plans, so it was just an impasse. And so it 19 was the judge who had to choose the plans. And so we 20 staffed the same process, answered any questions that 21 came up in court. So yes, we were experts in the 2001 22 and 2011 in court. 23 Q. Okay. Let me just ask you a follow-up 24 question about the 2011 litigation. That was, again,

25 a situation where there had been an impasse between

1 the legislature and the executive in terms of enacting 2 plan? 3 Right. Α. In the course of that litigation, did some 4 Ο. 5 of the district court's decision-making, and I realize б there were multiple plans at issue, but did some of 7 the district court's decision-making go up to the state Supreme Court for review? 8 9 Yes. Α. 10 And to your knowledge, did the state Ο. Okay. 11 Supreme Court on that review, in its opinion, make any 12 suggestions or recommendations about what your role 13 might be going forward for the district court? 14 A. Yes, the Supreme Court told the district 15 court that they had to change the map and make some 16 changes based on the Supreme Court opinions. And the 17 Supreme Court recommended to the district judge that 18 it was okay to use Research & Polling to help the district court judge accomplish it, accomplish the 19 20 wishes of the Supreme Court. So we worked with the 21 district judge to satisfy the district judge's 22 requests. 23 Q. And in that capacity, I realize this is

23 Q. And in that capacity, I realize this is 24 probably more of a legal them than in your field, but 25 does the term Rule 11-706 expert sound familiar to

1	you?
2	A. Yeah, that does sound familiar.
3	Q. Was that the role that the played for the
4	district court in that 2011
5	A. It was.
6	Q. Okay. All right. And did your expert
7	/W-RBG in that 2011 case, which is sometimes referred
8	to as the Egolf case, sometimes as the Maestas case,
9	I'll just call it the 2011 case, did your work in that
10	case involve I realize there were not claims of
11	partisan gerrymandering as there are now, but did your
12	work at that point involve looking at issues
13	surrounding partisan performance and competitiveness
14	and (inaudible)?
15	A. It did.
16	MS. SANCHEZ: Your Honor, at this point, I
17	would tender Mr. Sanderoff as an expert in New Mexico
18	elections and political performance.
19	MS. DIRAGO: No objection.
20	THE COURT: All right. Mr. Sanderoff is an
21	expert in New Mexico elections political performance.
22	MS. SANCHEZ: Yes. Thank you.
23	May I approach, your Honor?
24	THE COURT: Yes.
25	BY MS. SANCHEZ:

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1	Q. Mr. Sanderoff, I've handed you what we've
2	marked as legislative defendants Exhibit D, as in
3	David. Do you recognize that document?
4	A. I do.
5	Q. Is this a copy of the expert report you've
6	issued neighborhood connection with this case?
7	A. It is.
8	Q. I would like to ask you, we won't go over
9	the your experience and credentials, because we
10	already have talked about that, but I would ask you to
11	please flip to Page 5 of the report.
12	Towards to top of Page 5, you see
13	there's a Roman Numeral II, where it says "Scope of
14	Expert Engagement"?
15	A. Yes.
16	Q. Okay. It says there that you were retained
17	by counsel for the legislative defendants to evaluate
18	the political competitiveness of the congressional
19	redistricting plan that we're calling SB-1. Do you
20	see that?
21	A. Yes, I do.
22	Q. Okay. And is that a fair statement of the
23	scope of what you were engaged the in this case?
24	A. I think so, yes.
25	Q. Okay. Look at the next section of your

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report, identifying the data and materials that you relied upon, these are -- these are really pretty self-explanatory, but I'd like to ask you specifically about the fifth bullet point there, which references Justice Kagan's dissenting opinion in Rucho v. Common Cause.

7 Can you talk to us a little bit about 8 why that was something that you looked at in the 9 course of developing your opinions in this case?

A. Well, I think that I read the New Mexico
Supreme Court order, and I think it mentioned Justice
Kagan's dissenting opinion in Rucho, so I figured I
better read it.

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Q. And did you, in fact, read it?

A. I did. Well, at least the relevant parts.

Q. Sure, sure. In -- let me -- let me -before we dive into your opinions in connection with that, let me just ask you about something here that's at the bottom of the page, where you note, as we've already discussed, that you didn't have any role in designing SB-1 or consulting on the development of SB-1.

Is it true, Mr. Sanderoff, that your opinions that you've developed here are solely based on the information you've identified in your report,

not on any type of involvement in the creation of 1 2 SB-1? 3 Correct. Α. Okay. Let's -- let's dive into your 4 Ο. 5 opinions then on Page 6 so your first opinion here б says SB-1 does not entrench the Democratic party in 7 power. Is that a fair statement of your opinion? Correct. 8 Α. Okay. Can you tell us what -- how you were 9 Q. 10 using the term entrenched in making that opinion? 11 Well, the term entrenched to me, has always Α. meant something that is entrenched, that change would 12 13 be very difficult, if not impossible. The first thing 14 I did was look it up in a few dictionaries, and came 15 up with the same conclusion, that to entrench someone 16 or something is to make it difficult or impossible to 17 change. 18 And so, in Justice Kagan's dissent, she 19 was speaking about entrenchment as -- you have to 20 demonstrate evidence of entrenchment as one of the tests that she has in a case. So the first prong, if 21 you will, of Justice Kagan, which just quoting from my 22 23 report which quotes from her, as to whether state 24 officials predominant purpose in drawing the district 25 lines was to entrench their party in power by diluting

votes of citizens and favoring it's rival. 1 2 And then the second prong was effect, 3 did they pull it off, they had they did he know trench? And so when I -- reading that, I then looked 4 5 at the second congressional district and felt that б given -- for two different reasons, which I suspect 7 you're going to ask me about, I felt it was not entrenched. 8 Okay. And I am going to ask you about those 9 0. 10 reasons. 11 Α. Okay. So you identified two bases for this 12 Q. Can you start with the first one, which I 13 opinion. 14 believe referenced the partisan performance index? 15 Right. When one runs the partisan Α. performance index for Senate Bill 1 and looks at the 16 17 average of those 26 statewide elected officials over 18 that time frame, one finds that the average Democrat 19 receives 53.0 percent, and the average Republican 20 receives 47.0 percent. So a 53/47 margin among those 21 26 statewide elected officials. 22 It's been my experience over the decade, 23 when people start talking about a competitive race, 24 they start with a range of 54 to 46, and then look at 25 lots of other factors to determine if a race is

competitive.

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2	In this case, it's the margin is
3	smaller than 54 to 46. It's 53 to 47. So in my
4	world, and the world, in the world of people who I've
5	associated with over the years, when they're looking
6	at whether or not a race is worth spending lots of
7	resources to hold on to, or to try to defeat and
8	incumbent, 53 to 47, would be a competitive race, and
9	therefore not be entrenched, if entrenchment means
10	making it very difficult if not impossible to change.
11	Q. Okay. Thank you for that explanation. And
12	I think you were asked some questions in your
13	depositions about in your deposition about this 46 to
14	54 percent competitive range.
15	Do you recall being asked in your
16	deposition whether you could identify any races in
17	New Mexico where the Democratic performance was 54 or
18	higher, the Republican at 46 or lower, and yet the
19	Republican actually won the race? Do you remember
20	being asked about that?
21	A. Yes.
22	Q. When you were asked about that in your
23	deposition, could you off the top of your head come up
24	with examples?
25	A. Not off the top of my head. I didn't even

1	try. But no, I did not come up with any off the top				
2	of my head.				
3	Q. Okay. Since you had your deposition, have				
4	you had an opportunity to look at records of election				
5	results and raises and performance index and identify				
б	whether you did find any examples that fit that				
7	category?				
8	A. Yes.				
9	Q. Okay. And did you?				
10	A. Yes.				
11	Q. Can you share those?				
12	A. So we looked at the legislative races, and				
13	we found that house District 39, which is in the				
14	Silver City, Sierra County area, touches of Dona Ana				
15	fell into that category where the average Democrat I				
16	can performance in 2014 with, the average Democratic				
17	performance was 56.7, but the Republican won it 53/47.				
18	And actually, House District 39, which				
19	is one of those districts that's bounced back and				
20	forth over the decades, Representative Terrazas is				
21	there now, Rudolpho Martinez was there, we all know				
22	that seat going back and forth over the years, it also				
23	fell into that category in 2020 and 2022.				
24	So even with the new district boundaries				
25	after redistricting, once again House District 39				

three times -- so it would go back and forth between 1 2 Democrats and Republicans, but three times the Republican won it, despite the relatively high 3 Democratic Performance Index. 4 The other example that we found was in 5 б the state senate, State Senate District 30. Joshua 7 Sanchez. He is a Republican and he won with a Democratic Performance Index of 54.1. So even the 8 Democratic performance never was above 54 or 54.1, the 9 10 Republican won it by two percentage points. Q. And do you know, Mr. Sanderoff, do you have 11 12 any reason to think that in any of those raises you've 13 just identified, where the Republican won, had there 14 been some kind of scandal or disaster for the 15 Democratic candidate in those races where they went to 16 jail or got caught doing something awful? Not to my knowledge. I did have have a 17 Α. 18 staff person check, anticipating that. 19 Okay. Q. 20 But no, not to my knowledge. Α. 21 So let's -- coming back to your report, Ο. 22 then. So I think we've kind of talked about the first 23 basis of no entrenchment opinion based on the 24 competitive range under the partisan performance 25 index. What is the second basis of your opinion that

there's no entrenchment?

A. Well -- and the first one, as you said was the partisan performance index. And there's I think a lot of value in that, generally. But you know, there's nothing like looking at an actual election within the actual congressional district under the new boundaries.

And so we did have an election in November of 2022 under the new district boundaries, and in that election, Gabe Vasquez was running against Yvette Harrell, and in that election, Gabe Vasquez one by seven-tenths of one percentage point. So it was a really close race, and the Democrat won it by the smallest of margins.

It was a margin of 1350 votes out of 16 192,000. And so therefore, that was the second prong 17 of my opinion on that (inaudible) of one does not 18 entrench the party in power, since one, performance 19 index is at 53/47, and the actual election, the 20 Democrat performed even lower than what we had in that 21 Democrat performance figure of 53 to 47.

So it was based on those two things. Isaid, this doesn't look like entrenchment.

24 So under the first item, the index. It 25 appears to be a competitive race. Under the second

item, the actual election returns, it appears to be 1 2 what we call a toss-up race, you know. And I think 3 that word's self-explanatory. 4 Okay. And included in that toss-up, does 0. 5 that mean a candidate of either major party could win? б Α. Yes. In 2024, any party, any candidate 7 could win, absolutely. Okay. Before we leave this topic, I want to 8 Ο. come back to -- you've indicated you had read Justice 9 10 Kagan's dissent on this subject. Are you aware that 11 just about a week ago, our state Supreme Court issued an opinion in this very case to provide some 12 additional quidance to the district court about what 13 14 the Court should be evaluating or looking for in this 15 case? 16 I read it. Α. Yes. You did. Okay? And I want to read to you 17 Ο. 18 really just a sentence from the that opinion and ask you if it -- well, I'll read it first and then ask you 19 20 the question. 21 The sentence is, and this is, for 22 residence, this is September 2022 -- September 22nd, 23 2023 opinion of the state Supreme Court in this case, 24 at Paragraph 30. And the sentence is, quote, 25 talking -- again, talking about entrenchment, quote,

1 the consequences of such entrenchment under a partisan 2 gerrymander include the that ensuing elections are 3 effectively predetermined, essentially removing the 4 remedy of the franchise from a class of individuals 5 whose votes have been diluted.

6

A. Yes, I read that.

Q. You read that? Okay. And does that -- does that sentence, does that description of entrenchment and its consequences jibe with your understanding operate entrenchment that you use to develop your opinion?

A. So as -- to restate, to make sure I understand, the Supreme Court was basically saying, they're associating having to have a predetermined county come for ensuing of future races as associated with entrenchment.

So I would say, if I you understand your question, that no, we're not predetermining the outcome of future raises here. We have a toss-up race that was won by seven-tenths of a point. And it would be a big question mark about what would happen in this district in the future.

23 Perhaps, it can go back and forth over 24 the years or what have you. It is no predetermined 25 outcome in future races.

Would you agree that a competitive or 1 Ο. 2 toss-up district, such as this one, effectively the 3 opposite of a predetermined entrenched outcome? A toss-up is the opposite of predetermined, 4 Α. 5 sure. Okay. So, Mr. Sanderoff, I'd like to move б Ο. 7 on to your second opinion on Page 7 of your report. And here you say prior to SB-1, CD-2, or congressional 8 District 2, was not a safe Republican district but was 9 a strong leaning Republican district. 10 11 Is that your opinion? 12 I believe that CD-2, under the old Α. Yes. 13 boundaries, was a strong leaning Republican district. 14 Q. And in order to form your opinion on the 15 topic, what types of raises did you analyze? 16 This time, I stuck to the actual elections Α. that occurred within the congressional district among 17 18 the congressional district candidates over time. Again, we talked about the partisan 19 20 performance index. It's has its value, everybody uses 21 it. But there's nothing like also looking at, well, 22 what happened in that congressional district over the 23 years in real elections with the candidates who live 24 there, who lives in Hobbs, who live in Las Cruces, who 25 live in Alamogordo, and all the dynamics of the local

race itself.

Q. Okay. And it indicates here in your report that you looked at those races within CD-2, going all the way back to 2002. Can you talk to us about why you used that time frame?

A. It was perfectly appropriate to not only go back ten years, but to go back 20. And the reason is, the simple answer is the boundaries of the second congressional district did not change much between decades ago and last decade.

11 In the 2011 litigation -- in the 2011 12 litigation, where the judge had to choose a 13 congressional plan, he mandated what was called a 14 least changed plan. All the different plaintiffs and 15 defendants could pitch their plan, and the judge chose 16 the plan that made the least change in the boundaries 17 from the 2002 boundaries to the 2011 boundaries and up to 2020. 18

So it was okay to look back 20 yearssince the boundaries hadn't changed much.

Q. Just a minor follow-up on that. Are you familiar with what the judge's reasoning was for taking that least change approach we know he had to draw the map?

25

A. I am.

And what was that? 1 Ο. 2 Well, because that happened twice, those two Α. 3 impasses with the legislature in the executive 2001 and 2011, the judge's rationale in both decades was, 4 I'm going to go back to the expression of legislative 5 б intent, when they drew the congressional boundaries. 7 So the last time the legislature, the governor actually got together and passed the bill was 8 9 in 1991. And so the judges would continue to pass 10 least changed plans since the last -- the judges did not want to get into the business of redrawing the 11 maps. So they went with the smallest boundary changes 12 13 possible to account for population shifts. 14 And since all three districts have a 15 major population center, Las Cruces, Albuquerque, 16 Rio Rancho, the population shifts did not have to be major. 17 So when you looked at the history of 18 Okay. 0. these congressional raises within CD-2, between 2002 19 20 and 2020, what did you find? 21 Well, so if we study the 2002, you know, Α. 22 that was the year that Steve Pierce first got elected 23 to Congress. And before Steve Pierce was in Congress, 24 he served two terms in the state house, 1996, he was 25 elected, 1998, he was elected. So he had already

1 established a significant amount of name recognition 2 and fame in his district. 3 And so -- and Steve Pierce stayed in 4 that district until 2019, with one stint when he was 5 out for a while, and we'll talk about that. So

6 basically, from 2002 to 2019, with one break in7 between, Steve Pierce was the Congressman.

And I was around then, of course, and 8 observed things. And what I was impressed by was the 9 10 margins. He would win his elections by big margins. 11 And Steve Pierce prided himself on not just working 12 the conservative areas. Steve Pierce focused on 13 Democratic constituencies. He went into predominantly 14 Hispanic communities and Native American communities 15 where, frankly, they usually vote Democrat, and would 16 talk to the leaders there.

And so he was going beyond what a 17 18 typical candidate would do, and as a result, he would 19 win his races by big margins. I don't think I'm you 20 have school in telling the story that in 2011, I received two calls from Native American leaders and 21 22 they said, "Yeah, we know we all vote Democrat," this 23 and that, "but holding all things equal, when you're 24 drawing plans for legislators, we don't care about the 25 boundaries, we would like keep Steve Pierce as the

person who represents us in the Second Congressional 1 2 District." So it showed that he worked hard, will he 3 did well. And he won by big margins. So what am I getting at here? Well, in 4 5 2008, Steve Pierce decided to run for higher office б and he left his term, he left his position in the 7 house. And so here he had an even playing field where you didn't have an incumbent, and powerful incumbent, 8 he's no longer running, and what happens, the Democrat 9 wins the district, Harry Teague. And he wins it by a 10 11 pretty comfortable margin. 12 Then, Steve didn't win his raises statewide, but he ran for re-election after using the 13 14 race for U.S. Senate, then in 2010, beat hairy 15 together by big margins and was back in Congress. 16 Then in 2018, Steve Pierce decides to run for governor. So he's not in his house seat 17 18 again, and what happens, a Democrat wins it. So the two times he's not there within that 20-year appeared 19 20 and backs down to run for higher office, a Democrat 21 wins. 22 So what that tells me was, I'm note --23 this is a safe -- excuse me -- a strong leaning 24 Republican district, it is, and most of the time. But 25 in the two cases here where he didn't run, the

1 Democrat won. So that's why I call it a strong 2 leaning Republican district, not a safe guaranteed 3 one, because of the story I just told. 4 All right. Thank you okay. Let's turn 0. to -- and just I think we can briefly do these last 5 б couple of opinions. Your third opinion on Page 9 of your 7 report, talks about all three -- under SB-1, all three 8 9 of New Mexico's congressional districts became more politically competitive. Can you tell just briefly 10 11 explain how you arrived at that (inaudible)? 12 Α. Yes, very simply. Kept away from the 13 indexes. Simply averaged. 14 So in CD-1, for example, there were five 15 congressional races. During the decade and looked' 16 average margin on victory and compared it to do margin of victory for 2022 with the new boundaries. 17 18 So, for example, in CD-1, under the old boundaries in five elections, the average margin of 19 20 victory was 21 percent. It was cut in half to 11 and 21 a half percent with the new district. And I don't know if you want me to go over the numbers, but that 22 23 was the methodology we chose. It's within the report. 24 And in all three cases, the most recent raise in 2022, with the new boundaries, the margin of 25

victory was less than the average of the five raises 1 2 under the old boundaries.

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Okay. We've heard in this case, and I Ο. realize you haven't been here until today, but we've 4 heard some testimony some argument that the fact that of all these three districts becoming more competitive is actually a bad thing, that's a negative -- goes not negative column about the map.

9 Did you agree or disagree with that in terms of the value of making these districts more 10 11 competitive?

Well, I guess that a public policy question. 12 Α. 13 People could agree to disagree. I mean, my view, if 14 you're just asking my view, people who represent very 15 safety districts can be very strong willed about their 16 opinions and sometimes inflexible. If you look at what happens in Congress right now, it seems like the 17 18 people who are trying to break the gridlock and try to 19 work out a bipartisan agreement are the ones who live 20 in swing district. They want to get reelected by not 21 taking a very right wing position or left wing 22 position. I personal think competition is good, if 23 it's (inaudible) competition, yeah.

24 Q. And I'm going to read you another quote from 25 another decision. This is in Maestas v. Hall case,

1	2012-NMSC-006. This was the Supreme Court's decision				
2	in that the case we've been talking about, the 2011				
3					
	redistricting case. And I'm in paragraph at the				
4	end of Paragraph 41.				
5	And the opinion states there, this is				
6	the chief Justice Chavez, competitive distinct are				
7	healthy in our representative government because				
8	competitive districts allow for the ability of voters				
9	to express changed political opinions and preferences.				
10	Do you agree with that statement?				
11	A. Yes.				
12	Q. Based on your experience following elections				
13	in New Mexico?				
14	A. Yeah. That's my viewpoint.				
15	Q. Okay. All right. I think I want to keep my				
16	eye on the time here, moving on to let me just ask				
17	you briefly about your fourth opinion, Mr. Sanderoff,				
18	and that's on Page 11 of your report.				
19	Here you say political party				
20	registration numbers are not meaningful predictors of				
21	partisan performance in elections, especially in				
22	Southeastern New Mexico.				
23	Can you explain to us the basis of that				
24	opinion?				
25	A. Yes. So and if everyone is looking at				

1 their report, there's a visual on Page 13. It just 2 shows the percentage of registered Democrats, 3 Republicans and Independents in the State of 4 New Mexico over time. And what it shows is that the 5 percentage of Democrats continues to decline, 6 Republicans have been pretty stable, and Independents 7 rise.

Yet, at the same time in the State of 8 New Mexico, the state has become more blue, more 9 10 Democratic, especially in places like Albuquerque. 11 And we see that graphic visually on Page 12, where we just take as an example, the president raises. Look 12 at 2000 and 2004 on Page 12. New Mexico was known as 13 14 the battleground of battleground states in president 15 race razz.

Then by 2014, Obama won by 15, then by 17 10 percent, then by 8. And this chart, I made a 18 mistake in cutting and pasting. I left off the 2020 19 race where Biden won't by 10.8 percent, so that should 20 have been on the chart as well.

And so the point was, on the one hand, New Mexico is becoming more blue, especially in the cities. On the other hand, the Democratic voter registration continues to dramatically. And so I'd be cautious about using Democratic voter registration as the predictor of partisan performance. Especially you
 then have all those Independents who are more fickle.
 They're up to 25 percent.

4 So that was, in a nutshell, why I 5 concluded that.

Q. Okay. Great. And I think on Page 13 of
your report, underneath that chart you were pointing
to, you offered some observations or reasons why, you
know, there might be that disconnect between the
registration numbers and the actual political
performance.

A. Right. One of the biggest reasons why Democrats are declining and Republican has been stable, is because a lot of conservative Democrats have switched their registration to Republican. We saw a lot of that Southeastern New Mexico over the last couple decade.

There was a time not that long ago in Southeastern New Mexico, where there were Democrats and Republicans in Eddy County. You know, those days are gone. And so if you have conservative Democrats switching over to become Republicans, Republican are passing on (inaudible). They're being replenished by Democrats and they're switching parties.

25

And then Independents is another we have

to be careful. Because a lot of young people have dismissed both parties. A lot of young parties are disenchanted with the Democrats and the Republicans. And so they're registering without any affiliation, and so that's confusing the data as well for the purposes of using registration to protect partisan performance.

Q. Thank you. Mr. Sanderoff, kind of shifting gears a little bit and, again, kind of harkening back to your deposition in this case, do you recall being asked some questions about using or taking into consideration the location of oil and gas wells and the oil and gas industry in redistricting? Do you recall being asked some questions about that?

15

A. I do.

Q. And I think, if I'm correct, you indicated in your deposition that you hadn't before in your experience redistricting in New Mexico, you hadn't been asked to do that or to take that particular factor into consideration.

A. The factor of where the oil wells are indrawing district boundaries?

23

24

25

Q. Right.

A. I've never been asked that.

Q. Okay. Okay. Let me ask you this, though,

1	just based on your decades of experience here in
2	New Mexico following the politics in the state
3	government and all the issues that you follow, there
4	at Research & Polling.
5	Are you familiar with whether the oil
6	and gas industry place a roll in the New Mexico any?
7	A. Yes.
8	Q. And how would you describe that?
9	A. They play a fantastic roll, a big role.
10	(Inaudible) quoted in the newspaper at people use
11	different numbers, but 40 percent of the state's
12	government revenue comes from oil and gas. Revenue
13	streams are coming in from the leases, the royalties,
14	the taxes, gross receipts tax, the payroll taxes. And
15	so oil and gas is a big driver of New Mexico's
16	economy.
17	Q. Okay. And do you recall being asked in your
18	deposition a question about whether it makes sense to
19	split the oil wells among different congressional
20	districts in the State of New Mexico?
21	A. I don't remember exactly what I said. I
22	think that I had never asked to. If somebody had a
23	plan to create two voices within this monolithic
24	group, that would be an example of what could be done,
25	I guess.

1 Ο. Sure. And have you seen examples, even in 2 this last redistricting cycle of any groups who specifically asked to be split month different -- two 3 have two voices, for example, in Congress instead of 4 5 one, and to be drawn across district lines? б Α. We're not talking oil and gas now? 7 Right, yeah. Just any -- any example that Ο. comes to mind? 8 The prominent example is June any 9 Α. Yeah. They wanted to be split between two 10 pueblo. 11 congressional districts, because Native Americans have 12 a lot more work with the federal government than they 13 have with the state. And so they want to be split 14 between congressional districts. And the boundary 15 happens to fall in a place where that's doable. 16 Mescalero wanted to be split between two congressional districts. 17 18 Los Alamos County are, I drew all these 19 beautiful plans for their consideration to unify 20 Los Alamos County, they said, "No, we want to be 21 split." 22 Los Alamos -- I'm talking state senate 23 now. I'm sorry. They wanted Los Alamos townsite in 24 one state senate district and White Rock in another 25 state senate district to have two voices there. And I

2 probably shouldn't have said that, but... 3 No, no. Just general examples, I mean, as a 0. general matter, based on again, your experience, your 4 5 knowledge of the state, of how politics works in the б state, how districting works, is there anything 7 inherently wrong with wanting to have two voices representing a particular area, a particular industry, 8 a tribe, as opposed to one? 9 10 If that's their strategy. You know, Eddy Α. 11 County grew so much, as did Lea County. And so with 12 the citizen redistricting committee, I drew these 13 beautiful maps that Lea County could have its own 14 senator, Eddy County could have their own state 15 senator. And Eddy County commission said, "No. We 16 want to be split two or threes ways. We like having rep .45's Lea County, Otero County, Eddy County and 17 18 sometimes" -- but it's just strategic decision of the /TKPWHROUP about whether they want to be kept together 19 20 or have more voices, where they might not ever elect 21 somebody. But so I see examples of that. 22 And it's a policy decision? Ο. 23 Α. It's policy political decision. 24 Q. Okay. Well, thank you very much

don't know if you were just talking about Congress.

1

25 Mr. Sanderoff. Appreciate your time this afternoon.

Ι

MS. SANCHEZ: I'll pass the witness. 1 2 THE COURT: All right. Thank you. 3 Cross-examination. 4 CROSS-EXAMINATION BY MS. DIRAGO: 5 б Ο. Hello. 7 Hello. How are you? Α. Q. Good. How are you? 8 9 Fine. Thank you. Α. 10 Q. So I deposed you virtually. You're taller 11 in person. I'm probably shorter in person than you 12 expected, so I guess we're even. As Sarah mentioned, 13 I have too much paper. 14 Okay. I guess it's probably easiest to 15 just go into what you were just testifying about, I 16 think you said, the Indian reservations mentioned they 17 wanted to be split up. You might have mentioned 18 another -- I think you weren't talking congressional 19 redistricting or -- but maybe Los Alamos, or --20 Α. Yeah, state senate. 21 State senate. Okay? Did anyone from the Ο. 22 oil and gas industry indicate that they wanted to be 23 split up in this redistricting process? 24 A. No, not to me. 25 Ο. Well, and you actually participated in the

CRC redistricting process, right? 1 2 Α. We did. 3 And -- that's pretty cool, by the way. You Ο. attended most of the public meetings that the CRC held 4 5 because RPI staffed -- your company staffed those б meetings, right? 7 Right. And the ones I didn't attend, I Α. watched on Zoom. 8 9 Oh, I didn't know that. Okay. So during Ο. all those public meetings, did you ever see anybody 10 11 ask for the gas and oil industry to be split up? 12 Α. No. As far as you know, no one at the CRC 13 Ο. 14 committee had the goal of spreading out the oil wells 15 in the state, right? 16 They -- to my knowledge, no. They've never Α. requested any plan from us to draw that would do that. 17 18 Okay. And what about -- I think you said Q. you've been doing this since 1981. Have you ever had 19 20 a request to split up the oil wells in the state? 21 Α. No. 22 Have you ever -- before this case, have you Ο. 23 ever even heard of somebody wanting to do that? 24 Α. No. So there are a lot of oil wells in the 25 Ο.

southeast, right? 1 2 Α. Yes. Southeast of New Mexico. I don't know if 3 Ο. that's why you hesitated, but I should -- I should 4 5 clarify. б Α. I was just clearing my throat. Okay. And a lot of people who live in the 7 Ο. southeast also work for the oil industry, right? 8 9 Α. Yes. 10 And you agree that a lot of voters in Ο. 11 Southeastern New Mexico have a common outlook, right? 12 A. Yes. Q. And some might even call that a community 13 14 after interest? 15 Α. Yes. 16 And do you think it's because of this common Ο. employer -- not a common employer, but working for the 17 18 same industry? 19 Among other things, yes, sure. Α. 20 Q. Are so you also were testifying that SB-1 21 made D-2 more Democratic, right? 22 Α. Yes. 23 Q. And I think you said under RPI's partisan 24 performance index, D-2 is now 53 percent Democrat and 25 47 percent Republican?

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A. Correct.

Q. And you weren't looking at what the partisan performance index of D-2 was under the previous map, right?

A. No.

Q. Okay. So it wouldn't matter to you if SB-1 made D-2, that's congressional District 2, like 20 map number of times more Democratic? It wouldn't matter to your analysis that it's competent now?

10 A. We didn't focus on that topic. We focused11 on the topics in my report regarding competitiveness.

12 Q. Okay. So you weren't looking at, like, the13 changes that had been made.

14

A. Correct.

Q. Okay. Are and your personal definition of competitiveness is where the district is between 54 and 46 percent Democratic to Republican?

18

21

A. As a starting pointed, yes.

19 Q. Okay. Or either, I guess it could be 20 Republican to Democrat?

A. Sure.

Q. Okay. But this range is not based on anyresearch or ^ studies ^ studs, right?

24A. No. It's based on my experience of 40 years25of using it.

Okay. So -- and I understand in your 1 Ο. 2 deposition you couldn't remember any examples where a 3 Republican had gone a district that was percent 4 Democrat. And you have since gave a couple examples, 5 right? б Α. Correct. 7 But you also testified at your deposition Ο. that a Republican winning a district that was 54 8 9 percent Democratic would be a rare event. Do you 10 still agree with that? 11 Under many circumstances, I believe -- well, Α. 12 I found two and where one of them it happened three times. But I would say, to answer your question, that 13 14 the 54/46 would be the starting point. I would want 15 to see more factors for me to then say the Republican 16 has a reasonable chance of winning. 17 If, let's say, the Democrat had a higher 18 name recognition or there was some baggage with the Republican, then the 54/46 could become very, very --19 20 the Democrat could become very vulnerable. 21 So that's why I say it's a starting 22 point. I would look deeper into other factors to 23 determine whether it's feasible for a Republican to 24 win a 54/46 district. 25 Ο. Okay. So --

All things equal, it would be a long shot at 1 Α. 2 54. 3 Okay. So it would be difficult? Ο. Holding all things equal. But oftentimes, 4 Α. 5 there's not. Oftentimes there's great opportunities б for the Democrats or the Republicans at the 54/4611. 7 Okay. And I think we agreed in your Ο. deposition that if anyone could guarantee that Juan 8 9 party would win a district, that either one of us 10 would be a very wealthy person. So I understand that there's -- anything could happen? 11 12 Α. Right. 13 Ο. Okay. And you did also say in your 14 deposition that the only way -- well, I don't want to 15 put words in your mouth. I think you said that if a 16 Republican won a district that was 54 percent 17 Democratic, that it would be for a special reason. 18 And that sounds to me what you're saying now? 19 A. Well, it could be for a special reason. I'm 20 saying it could be for other reasons, as well. But 21 yeah, sometimes legislators get defeated because of 22 controversies. Oftentimes those people end up getting 23 defeated in their primary, so they don't even make it 24 to the general election. 25 Ο. Right. Okay. So you testified that D-2 is

now 53 percent, which is an emergency more -- a 1 2 percentage -- well, a percentage less -- wait, it's 53 3 percent Democratic is what you said. Okay? Right? It's actually 2 percent, but which is 4 Α. Yeah. 5 a spread of -б Ο. Oh, yes. -- 6 points versus 8 points, right, 54 --7 Α. Yes, thank you. I'm glad you clarified that 8 Ο. That really helps. Okay. So anyway, the 9 for me. question is, if the DPI is 53 percent, would it still 10 11 be difficult for a Republican to win? 12 Α. Well, I guess -- no. I guess because we're 13 seeing evidence of that now, we're seeing a percent 14 Democratic performance and a 47 percent Republican 15 performance in that same district, CD-2, and the 16 Republican came within seven-tenths of a percent of winning it. So I would say no, it would not be 17 18 difficult. Q. Okay. Now, what about -- and we talked 19 20 about incumbent at your deposition, too. And I 21 believe you agreed that incumbent have an advantage at 22 the polls, correct? 23 A. Oftentimes, yes. 24 Q. Okay. So now why don't we make that 25 district just 53 percent Democratic, but there's a

Democrat who is an incumbent? Now is it difficult for 1 a Republican to win that district, all things being 2 3 equal, you know, putting aside a special situation where there's a scandal or something? 4 5 I think it's -- the case of CD-2, no, I Α. 6 wouldn't agree with you, because CD-2 is a conservative district. And the Democrats to be more 7 liberal. 8 9 Look what happened with Xochitl Torres Small, she won when she had no record. But then when 10 she had a record, Republicans were able to paint her 11 12 as too liberal, and then she lost. I think Vasquez could fall into that 13 14 same phenomenon, where even though he's the incumbent 15 now, I think he's fairly vulnerable. 16 Okay. So there are a lot of people in CD Ο. two that are conservative, I think you just said? 17 18 Α. Yes. 19 Okay. Hold on just a second. Q. 20 MS. DIRAGO: May I approach? 21 THE COURT: Sure. 22 MS. DIRAGO: I promise we will be quick. Ι 23 am exhausted. 24 BY MS. DIRAGO: 25 Ο. Okay. So I don't think I've actually asked

you about this at your deposition. So this was from Mr. Brace's expert report. And Mr. Brace is one of the defendants' experts. I know I asked you at your deposition if you read Mr. Brace's report. Is that still true, haven't? And you said no. Is that still true haven't read it?

A. Still true. I have not -- I have not seen
8 this or read his report.

9 Okay. So that's fair. So with what I want 0. 10 you to look at, then, is this second row here. And by 11 the way, the title here is NM underscore past SB-1 12 matrix. So this is information data that Mr. Brace 13 collected and put together in sort of easy to read I 14 think chart. And then the second row here shows 15 presidential elections, 2020, 2016 and 2012. And then 16 you can see on the left, you can go across by district to see -- now, what would happen if SB-1 the lines 17 18 were in play during these years, where the -- who the 19 district would vote for.

And so what I want -- let's start with 21 2020 and look across -- so we're cons rating here on 22 District 2. And you see that District 2 under SB-1 23 would have elected Biden by 53 percent, would have 24 voted for Biden by 53 percent?

25

A. Just for clarification --

Sure? 1 Ο. 2 -- are we on the second row? What you --Α. 3 Q. He. 4 Α. -- are we on? 5 I'm sorry. Yeah. Q. б Can I ask a question to help me understand Α. 7 this. Please. 8 Ο. 9 So we're at the three presidential years, Α. 10 2012, '16 and '20. 11 Ο. Yeah? 12 A. Are we looking --13 Q. '20 -- yes, you're right? 14 2020. Are we looking at actual election Α. 15 returns, or are we looking at what would happen under 16 the new boundaries? I got lost there. 17 Yes, under the new boundaries. 0. 18 So these are --Α. 19 Q. So it didn't actually happen. 20 A. Got it. 21 Q. Yeah. 22 A. Got it. 23 Q. But it's -- I guess it's if that election 24 took place today and SB-1 was in -- or I guess a 25 better way to say it is if the SB-1 lines were in

place at that time of that election? 1 2 It took me 2020 election results and Α. 3 reconfigured them under the new CD boundaries. That's right. 4 Ο. Okay. Just want to sure I understand. 5 Α. No. I -- that's totally fair. So it б Ο. 7 strikes me -- and District 2 would have elected -would have voted for Biden? 8 9 So there's that 53.0, the same as the Α. 10 partisan performance index. Q. Right, because -- right because it is, yeah, 11 12 yeah. 13 Α. Now, this is actual elections as compared to 14 (inaudible). O. Yeah. So --15 16 Α. That's good. No. You have a got index. And by the way, 17 0. 18 I've talked to people about you, and they all say you're the man, so you know your stuff. 19 20 Okay. So CD-2 would have -- this --21 well, we're not in District 2 anymore, but District 2 22 would have elected Biden. And then why don't you look 23 at 2016. District 2 with all the conservatives would 24 have elected Hillary Clinton by 53. We got 53.37 percent. And Obama, go across, District 2 would have 25

elected Obama by 54.89 percent, which is funny, base 1 2 even more than District 1 there. 3 But my question to you is, does that 4 surprise you, knowing -- and you just said that 5 District 2 has a lot of conservative people. Does б that surprise you? 7 Well, I quess the answer is no, because we Α. testified our partisan performance index for C2 8 9 through assistant 3 percent. And so we're seeing 10 (inaudible) number in 2020. Remember that /WHAOER 11 looking at is exogenous raises, you know what if Joe buy again don't live in the congressional district, 12 13 they don't live in Hobbs and Las Cruces, so all those 14 local factors you're not taking into account. So 15 these indicators have value. But let's remember what 16 actually happens within the congressional districts themselves. 17 18 Q. Right. So anything can happen, and you did testify to this at your deposition that, you know, it 19 20 depends on where somebody lives and if they're an 21 incumbent and a lot of things. But this is sort of, I 22 don't know, almost removing those considerations and 23 just saying on an average what would have happened in 24 District 2, which is so conservative. They would have

elected Hillary Clinton. Does that -- I mean, that

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surprises me?

2 A. Again, because we had an index showing 3 something similar, and then explain the difference between the performance indexes and the actual 4 5 election returns in the district, I'm not surprised. Okay. So we are not in district -- we're б Ο. 7 not sitting in District 2 anymore; is that correct? We are --8 Α. 9 Or do you know? Q. 10 -- in Lovington, and Lovington is in CD-3. Α. 11 CD-3. Okay. Are we in the same district as 0. 12 Santa Fe? Lovington is they same district as -- it's 13 Α. 14 CD-3, the same as Santa Fe, correct. 15 Okay. How far is that? 0. 16 Well, let's just call it a four-hour drive. Α. Okay. What about San Juan County, however 17 Ο. 18 is that? 19 A. Six hours. 20 Q. Really? Is that all? 21 Given the road network, it's not a -- not as Α. the crow flies. (Inaudible). 22 23 Q. Okay. And I can testify to that? 24 A. San Juan is the northwest corner of the 25 state, yes .

I'm very, very close to being done, but I do 1 0. 2 have to ask you another question about (inaudible). 3 So this is exhibit --4 MS. DIRAGO: Can I approach, your Honor? THE COURT: Yes. 5 6 MS. DIRAGO: So, so this is Exhibit 1 from 7 yesterday. I don't know if you want these (inaudible). 8 9 THE COURT: I've got one. I've got it. 10 MS. SANCHEZ: I have it, too. 11 BY MS. DIRAGO: 12 Q. Okay. I believe I did show you these at 13 your deposition. 14 A. You did. Yeah, I had given it a very quick read, but yes. 15 16 Yeah. Okay. Well, like I said, you get a Ο. shout out and a good one in these, but that's not why 17 18 I'm asking you, exactly. But my question, so why 19 don't we go down -- I do want to ask you in this, 20 like, a green box that says: That's good. You're 21 using Sanderoff's DPI, right? 22 Do you see that box? 23 Α. I do. 24 Q. And it says, NCEC gave them at 53 percent, 25 but their methodology is too generous, Brian is

1 better. Yeah, okay. So does that mean that NCEC 2 skews more Democratic with their numbers? 3 MS. SANCHEZ: Objection to the foundation. 4 She's asking him to speculate what some unidentified 5 б person said in a text message. 7 MS. DIRAGO: Well, and I can lay a little bit more foundation. I assume, he does polling, that 8 he would probably know who this is and what it means. 9 But it could -- fair point, I could ask him that 10 11 first. THE COURT: Go ahead and ask that. 12 13 MS. DIRAGO: If I weren't so tired, I'd 14 probably think of that. BY MS. DIRAGO: 15 16 Q. But do you know what NCEC is in this context, or can you guess? 17 18 I think it's the Democratic party's -- it's Α. a partisan performance index of another organization. 19 20 Frankly, I'm not sure exactly which one. 21 Okay. And I don't really -- I'm not asking Q. this to know who they are or for the truth of it. 22 23 My question is, do you think that 24 your -- that RPI's index skews Republican? Do I think it does? 25 Α.

1 Ο. Yeah. 2 Α. No. 3 Okay. Have you been told that before? Q. I've been told everything. All sides tell 4 Α. 5 me -б Ο. I don't doubt that. 7 All sides tell me everything. Α. Okay. So let's move down to that -- the Red 8 Ο. 9 Box that starts with Sanderoff's DPI. 10 And it says: Sanderoff's DPI for your 11 Map H is 51.8 percent. That's not enough for a 12 midterm election. So we adjusted some edges, scooped 13 up more of Albuquerque and now are at 53 percent. 14 And you did testify that CD-2 is now 53 15 percent Democrat. I just want to know if you agree 16 that CD-1 under SB-1 is now 54 percent. 17 Α. Under a DPI? Q. Yes. Was the DPI 54 percent -- is CD-1's 18 19 DPI now 54 percent under SB-1? 20 Α. Off the top of my head, I'm not sure. But 21 it would be close to that. 22 Okay. And what about CD-3 being 55.4 Ο. 23 percent? 24 Α. I think that -- again, I don't want to 25 overly speculate, but that's not an unreasonable

number. I don't know if it's to the 10th --1 2 Q. Okay. 3 -- because I don't have those numbers in Α. front of me. 4 So you don't have any reason to think that 5 Ο. what Senator Stewart is saying she did, you don't have б 7 any reason to doubt that's what happened? When you say "what happened"? 8 Α. 9 That --Q. 10 Oh, that they --Α. 11 That that's what they did to SB-1. Ο. 12 Well, let me just read this. Α. 13 Ο. Sure. 14 So we adjusted some edges, scooped up more. Α. It looks like they increased the 15 16 Democratic performance in CD-2. And what about the other districts? 17 Ο. 18 Well mathematically, they'd fall, they would Α. 19 go down. 20 Ο. Okay. So if you increase the Democratic --21 the DPI in one district, it's got to come from 22 somewhere, right, so the DPI in the other districts 23 would go down? 24 A. Correct. 25 Q. And is that --

At least in one of them. Possibly in both, 1 Α. 2 at least in one. 3 True, true. Okay. Q. 4 Α. Just simple math. And is that what happened between Map H and 5 Q. SB-1? б 7 Map H, Concept H, is a CRC map. Just Α. thinking out loud here. 8 9 Yeah, sure. Go ahead. Ο. Well, so what is your question? 10 Α. 11 My question is if that actually happened. Ο. Ι just want to know if that happened, that what she's 12 texting she's saying she did, did that actually 13 14 happen? 15 A. You're asking me if Senate Bill 1 ended up 16 at 53 percent DPI. And the answer is yes. Q. Yeah, that we know. I'm asking about now 17 senate -- CD-1 and CD-3. 18 19 I don't have those numbers in front of me to Α. 20 know if it's the exact number. 21 Okay. But you have no reason to doubt that Ο. 22 those are the exact numbers? 23 Α. I have no reason to doubt that -- I don't 24 know for sure. They don't seem unreasonable. But I 25 don't have those numbers in front of me.

Okay. That's great. Thank you. Let me see 1 Ο. here. I think we're almost done. 2 Okay. You did not look for indications 3 that the drawers of SB-1 had partisan bias, right? 4 5 Whether I looked for indications? Α. б Ο. Right. As an expert here and with your 7 expert report --8 No. Α. 9 -- that's not what you were looking at? Q. 10 That's not what I was looking at. Α. 11 Okay. And I think you said that you're not Ο. 12 in the business of assessing or evaluating plans, right? 13 14 Correct. Α. 15 O. And it's not --16 What I meant by that was, on the fancy Α. computer simulations and --17 18 Ο. Okay. 19 A. -- doing that highly specialized work, we're not in that business. 20 21 Yeah. Q. 22 Obviously I look at DPI as partisan Α. 23 performance index and assessing things. But no, we 24 don't -- we don't do that very specialized work. But 25 I guess experts on both sides had spoken about it

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today or yesterday. 1 2 Q. Yeah, I don't know if they're continue doing 3 that work after this trial. Okay. So but you've never provided 4 5 analysis about whether a map has been partisan gerrymandered, right? б 7 A. I've never -- correct. Okay. And you -- you're not providing an 8 Ο. expert opinion about whether SB-1 has be part January 9 gerrymandered here? 10 11 A. Correct. 12 Q. Okay. That's it. A. Great. 13 14 THE COURT: Redirect? 15 MS. SANCHEZ: No, thank you. Your Honor. 16 THE COURT: All right. I apologize. I just have a couple quick questions. 17 You mentioned, and it's been testified 18 19 otherwise, too, about the increasing number of 20 interested or no party -- I'm not even sure how 21 they're indicated now in New Mexico, but people who 22 are not Democrat or Republican or even really third 23 party, that that number increased last several years, 24 correct? 25 THE WITNESS: Yes. They're technically

unaffiliated. They're not independent party, small 1 2 i, independent, unaffiliated, where they -- when they register to vote they choose not to select in -- any 3 4 established party. 5 All right. And you mentioned in THE COURT: your report that many young people decline to state a б 7 party affiliation when they register but they often vote for Democratic candidates, correct? 8 9 THE WITNESS: Yes. The young ones. 10 THE COURT: So is that significant enough, 11 and if so, how do you -- when you're doing this 12 two-party system analysis for, you know, RPI or PP I, 13 political -- the partisan performance index, does 14 that skew that? Because there's an increasing number 15 in the district that aren't voting. How do you 16 account for that? THE WITNESS: Well, the DPI is based on 17 18 election returns. So it takes into account how 19 Independents are voting. 20 THE COURT: Okay. 21 THE WITNESS: So it doesn't skew anything. 22 Where it backs tricky in our polling, our public 23 opinion polling --24 THE COURT: Right. 25 THE WITNESS: -- where we segment the

1 results by party and we get to see how those young 2 Independents are voting more live really. But it 3 doesn't affect our DPI because we're looking at actual election returns. 4 5 THE COURT: Last question about б competitiveness. You had mentioned that 54 to 46 is 7 your competitiveness range, you said your starting 8 point. 9 Starting point. THE WITNESS: 10 THE COURT: And then you -- in your report, 11 you say other factors taken into account to determine 12 whether a race is competitive, are name recognition, 13 favorability, relative stepping and quality of the 14 candidates and their ability to raise campaign funds, 15 et cetera is there any way to quantify that? 16 No. That just takes judgment THE WITNESS: 17 and experience. 18 Experience, correct. THE COURT: THE WITNESS: You know, if one candidate is 19 20 really well known and well liked and the other 21 candidate is unknown, you know, that's going to be 22 really valuable in your assessment. 23 THE COURT: So, for example, and this was 24 testified to yesterday, I believe, by the plaintiffs' 25 expert, for this past election for District 2 that's

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under the SB-1 plan, even though Yvette Harrell was 1 2 an incumbent and even though it was a good year or Republicans, they took back the house of 3 representatives, she was one of only two incumbent to 4 lose re-election in the house. 5 б THE WITNESS: That's correct. 7 THE COURT: So those other factors, the incumbency, name recognition, all those didn't really 8 9 help her. Even though she same close, it didn't 10 really help her, correct. 11 THE WITNESS: Yeah. She's a one high who 12 term incumbent. So maybe it gave her some help. Not 13 to the level of 20 years worth, like Steve Pierce. 14 You take other things into account. She 15 did have the race against Xochitl Torres Small where she was beaten up pretty bad in terms of negative TV 16 adds. But then again, she ran her own adds that were 17 18 very positive and very good, take that into account. 19 But in this case, the incumbency 20 advantage that she had was not enough to get her over 21 the finish line. 22 THE COURT: So does that affect at all your 23 assessment that it is still a competitive district? 24 THE WITNESS: Yeah, it is. I believe it is 25 a really competitive district, just because of what I

said earlier about, you know, now that Gabe Vasquez 1 2 has a record, you know, typically in political campaigns, the other side will use a record against 3 you. And so I sincerely believe that that's -- that 4 5 this raids could go either way. And he doesn't б necessarily have the advantage or the disadvantage. 7 THE COURT: Okay. All right. Thank you I appreciate it. 8 9 Any other questions based on the Court's 10 questioning. MS. DIRAGO: No, your Honor. 11 MS. SANCHEZ: No. 12 13 THE COURT: All right. Thank you. 14 Mr. Sanderoff, you can step down. 15 THE WITNESS: Thank you. 16 THE COURT: Okay. Do you have any other 17 witnesses. 18 MR. OLSON: No witnesses, your Honor. We 19 just need a couple things. 20 THE COURT: Okay. I also want to make sure, just because I wasn't certain, was his report moved 21 22 into evidence. 23 MS. SANCHEZ: I failed to do that. I guess we could do it now, because we're going to move 24 25 (inaudible).

1 MR. OLSON: Move Exhibit D, your Honor into 2 evidence. 3 THE COURT: That's his report? Is it C. 4 MR. OLSON: MS. SANCHEZ: D. D is --5 б MR. OLSON: I think D. 7 D. Any objection to Exhibit D. THE COURT: MS. DIRAGO: No. No objection. 8 THE COURT: All right. Exhibit D will be 9 admitted. 10 11 MR. OLSON: Your Honor, just so it's clear 12 for the record, we talked about stipulation after the exhibits that were attached. The annotated findings 13 14 and conclusions, but we would formally move the 15 admission of Exhibits 1 through 36 that were attached 16 to our annotated findings and conclusions. 1 through 35, your Honor, was attached 17 18 to the annotated findings and conclusions submitted 19 on September 15th, 2023. 20 And Exhibit 36 was attached to the annotated sort of rebuttal findings of fact and 21 22 conclusions of law submitted on September 20th, 2023. 23 So we would make sure -- we'd move formally for the 24 admission of those. 1 through --25 THE COURT:

1 MR. OLSON: 36. 2 Are there two groups then, are THE COURT: 3 you saying. There's one through 35 are 4 MR. OLSON: 5 attached to the initial. б THE COURT: Okay. 7 MR. OLSON: The filing on September 15th. And 36 was attached top the filing on September 20th. 8 9 THE COURT: Okay. 10 Any objection from plaintiffs? 11 MS. DIRAGO: No objection. But I would like 12 clarification on -- and it doesn't have to be right now. But I know you said we're going to revise our 13 14 findings of fact. Are we going to be allowed to use 15 evidence that were in our previous findings of fact 16 that were not admitted here at trial. 17 MR. WILLIAMS: Except (inaudible). 18 MS. DIRAGO: Sure, sure, sure. Well, you're 19 right. I don't take issue with the ones they have 20 objected to based on authenticity, but all the other 21 ones. But I'm not just not clear on the procedure. 22 I wasn't aware that we had to move them all into 23 evidence. And maybe we don't, in order to use them 24 in our forthcoming brief. 25 THE COURT: So my understanding at the

1 beginning is that there was a stipulation that they 2 were coming in. 3 MR. OLSON: Yeah, I want to make sure for the record. Yeah, there is a stipulation, your 4 5 Honor. б THE COURT: I think he's just making a 7 record formalizing that they're coming in. MR. TSEYTLIN: Your Honor, you know, not 8 only -- we also are going to have additional ones 9 10 that come in /TW production, so --11 THE COURT: Okay. We'll talk about that in 12 a minute. 13 MR. OLSON: Sure. 14 MS. DIRAGO: Okay. 15 THE COURT: So they'll be admitted. The only other thing, your 16 MR. OLSON: Honor, we would move Exhibit E. I'll show to the 17 18 Court. This is the first eight pages of the report post section review, the legislative finance 19 20 committee after this last session, regular session of the legislature. 21 And the reason for that, your Honor, is 22 it just is being tendered for the -- to -- because it 23 24 highlights the importance of the oil and gas industry 25 to the state as a whole, both from standpoint of the

state's economy, and the state's budget. So we would 1 2 tender it for that purpose, Exhibit E. 3 THE COURT: Any objection? 4 MS. DIRAGO: So what -- sorry. What is this? 5 б THE COURT: This is -- this was used in 7 questioning one of the witnesses today, correct? MR. OLSON: It was, your Honor. And it's a 8 9 report from the legislative finance committee, which 10 is an arm of the legislature. It's -- has a duty to 11 handle budgeting and revenue matters. And it's being 12 tendered for the purposes that I just stated. 13 MS. DIRAGO: I don't really -- I don't have 14 a problem with that. I mean, I obviously can't read 15 it to see if there's like hearsay and other things in 16 here that's objectionable. But I don't think your 17 Honor will use it for that purpose. So I don't have 18 a problem with. 19 THE COURT: It's a government probation 20 report. 21 It's a government document, your MR. OLSON: 22 Honor. 23 THE COURT: I'll admit Exhibit E. 24 MR. OLSON: And then we rest, your Honor. 25 THE COURT: All right. Rebuttal witnesses?

1 MS. DIRAGO: No. 2 THE COURT: Okay. All right. Do you want 3 to talk about the exhibits that were in question now? MR. TSEYTLIN: Your Honor, the only exhibits 4 5 in question were a couple that they objected to in a б motion in limine. As I indicate then, we hadn't 7 intended to rely on those and we didn't rely on them in trial and we don't intend to rely on them now. 8 9 THE COURT: All right. So are you gag to -you'll withdraw those. 10 11 MR. TSEYTLIN: Yeah. 12 THE COURT: Okay. MS. DIRAGO: Yeah. If we could -- we'll 13 14 would you those, if any. I just don't know offhand 15 if we have any exhibits that we haven't used here 16 that are in there. I don't think we do. 17 THE COURT: Okay. 18 MS. DIRAGO: But if you want me to go and 19 check to be sure, I can do that. But if we do have a 20 stipulation that they all come in, besides the ones 21 that they've objected to based on he or she, I 22 believe, then that's fine. 23 THE COURT: Are you okay with that? 24 MR. OLSON: I'm okay with that, your Honor. 25 THE COURT: Okay. All right. Let me ask,

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is -- is it the intent to do closing arguments? 1 2 MR. TSEYTLIN: Yeah. 3 MS. DIRAGO: Yeah. MR. TSEYTLIN: I mean, I understand we're 4 late. It's late here. I can do brief in my closing, 5 б just --7 THE COURT: You want to do it tonight or you want to do it tomorrow? 8 9 I'm sorry, your Honor? MR. TSEYTLIN: 10 THE COURT: Tonight or tomorrow. We have 11 the courtroom reserved for tomorrow. 12 MR. TSEYTLIN: Sorry? 13 THE COURT: We have the courtroom reserved 14 for tomorrow. 15 MR. TSEYTLIN: I think I'd only prefer to do it today. (Inaudible) till 5:30 yesterday. I can't 16 17 imagine that -- I mean, I'm not -- I mean, I can 18 limit myself to 15 means minutes. 19 MS. SANCHEZ: I can, too. 20 MR. TSEYTLIN: (Inaudible). 21 THE COURT: Okay. We're going to have to 22 take a short break before we do that then. Okay? 23 And then, do you have any other report 24 on -- from your people with the discovery. 25 MS. SANCHEZ: I haven't had an opportunity

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to check since we last spoke, but I can run out now 1 2 and try to get an update on this /PWRAOEBG. 3 THE COURT: All right. That would be good. And then --4 5 MR. TSEYTLIN: (Inaudible). б THE COURT: And I do want to talk about 7 that, then about how we're going to handle that f and when it comes through. Okay? All right. 8 9 MR. OLSON: Thank you, your Honor. 10 (Recess held from 4:50 p.m. 11 to 5:07 p.m.) THE COURT: What was Exhibit D? We're 12 13 looking for Exhibit D. I probably have it here, but 14 do you remember what it was? 15 MS. SANCHEZ: D is Mr. Sanderoff's report. 16 THE COURT: Okay. And was the marked copy his or. 17 MS. SANCHEZ: I think I handed it -- I think 18 19 I put the marked copy on the witness stand. 20 THE COURT: Okay. You want to -- you want 21 to put a --22 MS. SANCHEZ: Sticker? 23 THE COURT: -- sticker on this one and --24 MS. SANCHEZ: Sure. 25 THE COURT: You're good, you're good.

1 MS. SANCHEZ: That's the marked one? Okay. 2 Great. 3 THE COURT: I think this is a deposition and 4 some other things. (Inaudible crosstalk.) 5 б THE COURT: I don't think anything in there 7 is an exhibit, correct. MR. WILLIAMS: None of this was admitted, 8 your Honor. 9 10 THE COURT: All right. On the record? 11 Okay. We are on the record. The 12 evidence is closed. Plaintiffs may make closing 13 argument. 14 CLOSING ARGUMENTS 15 MR. TSEYTLIN: Thank you, your Honor. When I stood up here yesterday, I said 16 that we would bring into trial eight categories of 17 18 evidence that showed beyond any reasonable dispute 19 that this was an unconstitutional gerrymander under 20 Justice Kagan's test. 21 Now, there was obviously a lot of heat 22 about the simulations. But I think most of the eight 23 categories that I promised were essentially 24 undisputed. So I'm just going to go quickly through 25 them and summarize some of the evidence that we did

1 put.

2 First with regard to the statements, we 3 have the statements of Senator Stewart which provided 4 the DNA of the gerrymander. We asked multiple 5 witnesses about those statements. There really is б only one account of those statements that makes any 7 sense, which is that the Democrats who controlled the legislature were trying to create a near perfect 8 9 gerrymander by pushing up the DPI in District 2, 10 while not pushing -- as close to 54 as they could, 11 while not pushing it below 54 in other districts, 12 making it a near perfect gerrymander.

13 We have additional discovery that we're 14 going to be getting in the next couple of days. Some 15 of it has already started rolling in from the 16 congressional staffer. You'll see in our later submissions more evidence of the same character. 17 18 There's a clear, obvious, undisputed plan of creating a balance of near perfect gerrymander with a rob 19 20 Peter to pay Paul principle. That's the statements.

Text category is the process. We put on three witnesses here, completely undisputed that this process was entirely partisan. Republicans in the house and the senate were completely locked out of the process. It was done entirely one-sided.

Democrats wouldn't even invite Republicans into the 1 2 They accepted none of their ideas, none of meetings. 3 their changes. Again, entirely undisputed. Next is the voter registration stuff. 4 5 We put in undisputed from the secretary of state's б office through Mr. Trende's testimony and report that 7 the registration in D-2, which was the craft district, went from zero percent, exact by even, to 8 9 13 percent Democrat. 10 Now, understanding Mr. Sanderoff doesn't like registration as much, but the state Supreme 11 12 Court asked us to focus on it. Footnote 13 in the 13 Supreme Court's decision specifically talks about the 14 change in the voter register separation, and I think 15 with regard to change, what Mr. Sanderoff said he 16 didn't like about registration is you've got folks 17 who are increasingly -- young folks, increasingly 18 registered as Independents and things of that sort. You know, that might account for kind of the static 19 20 state of where the registration starts, but it 21 wouldn't account for the delta, the change that occurred, the change that occurred when they moved 22 23 from where it was before to SB-1 was a 13 point 24 registration swing in the Democrats favor. Exactly 25 the kind of thing the state Supreme Court told us to

1 look at.

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2 Next, this is the DPI, the various 3 And here are the story from actually aggregators. all four expert witnesses and the three that 4 5 testified here and then Mr. (Inaudible) report is the б same, which is the same story as in Senator Stewart's 7 Texas that will be in the additional evidence that's being produced now, which is that the district were 8 9 essentially balanced to be a near perfect 10 gerrymander, 53 for D-2 and then 54 and 55 for the 11 other two. So a near perfect gerrymander, which a perfect gerrymander would be 54, 54, 54, given the 12 13 political geography.

14 And by the way, the kept of a perfect of 15 gerrymander was 54, 54, 54, which Mr. Trende talked 16 about was undisputed in this trial. My friends asked 17 him a lot of hard questions, harsh questions about 18 his simulations. Actually no questions, no push back 19 on that part of his analysis. And that is I think 20 undisputed before this Court, and it's actually 21 supported by the evidence in the other three and kind 22 of the aggregate of -- some would call it DPR, some 23 would call it RPR, some would call it an index. But 24 it all really leads to the same.

Now, what we just heard from

Mr. Sanderoff, is that well, notwithstanding this, this doesn't lead to entrenchment. But what Mr. Sanderoff also testified is that he defines entrenchment as impossible or difficult to win the district.

6 We're happy with that phrasing. It is 7 clearly difficult for a party to within a district 8 where the undisputed evidence is that it's a 53 9 percent to 47 percent district. That means that in a 10 neutral year, with equally strong candidates and 11 equal funding, everything being equal, the Democrats 12 are going to win that 6 by 6 points.

Is it difficult for a party to win a 13 14 seat that the other side has by 6 points? Of course it is. That's six points. And we -- and I heard 15 16 Mr. Sanderoff talk about the 2022 election. But that really supports the same conclusion. You have an 17 18 incumbent, which is worth a couple of points. You had a national public -- I think Mr. Trende's report 19 20 says that a Republican won nationally by like 3 or 4 21 That's almost close to the 6 points right points. 22 That would account entirely for the close there. 23 race.

24 But I think it is most fair to measure 25 difficulty, which is Mr. Sanderoff's account for

entrenchment, standard for entrenchment, based on and 1 2 a neutral year, with neutral -- that's why, by the way, Senator Stewart was talking about DPI and saying 3 that 51.eight percent DPI in a midterm is not enough. 4 5 Because what you want -- so what's б difficult for the other side to win is that buffer. 7 So that when you have a difficult year for you, a hard year for you, because the other side has gotten 8 9 to could you please because the other side has got --10 wind at their sails due to the national environment, 11 you're still like lip to win. And so -- and I understand my friends 12 focused a lot on the fact that the 2022 race was 13 14 close. Again, I would underline that the state 15 Supreme Court said that the Maryland case that was 16 decided in Rucho is an important benchmark. There, there was also a very close raise that happened under 17 18 that map, ins a Republican year. And there, that was a Democrat incumbent that almost lost. 19 20 Now, the next category of -- and then also just one comment that they made during one of 21 22 their questions. They brought up Mr. Gallegos see 23 testimony that Republicans could win if they boosted 24 up their -- the turnout. 25 But Mr. Gallegos' testimony in Texas,

what he said afterwards, is that it's not an even playing field, that it could be difficult, which is exact I will the standard that Mr. Sanderoff talked about is this -- for entrenchment, which is difficult to win. And that's completely consistent.

Now the text door of evidence that I promised we'd talk about is the unnecessary movement of a lot of people. You've heard Mr. Trende talk about that, but in order to balance the districts for equal population to comply with the constitutional requirement for equal populaceness. You needed to move about 23,000 people.

What happened here is a movement of over 500,000 people, which is exactly the kind of thing that happened in Maryland that Justice Kagan relied upon. And that evidence came in from Mr. Trende. He wasn't questioned on it and nobody pushed back in any way on it. So that aspect of our proof is undisputed.

The next thing that I promised that we'd present is the DNA of the gerrymander, how exactly did the Democrats do this almost near perfect gerrymander. And you heard Mr. Trende testify that what happened is they took (inaudible) and they surgically moved around voters so you were adding Democrats to District 2 and you were taking Republicans out. You pointed to objective data showing that. There was no questions from my friends on the other side on that part of his testimony from either of their experts or their expert that was not testifying, Mr. Brace, owner that. So that is also undisputed.

And by the way it also matches up with what Senator Stewart said in text messages, was that they took Concept H, 51.8, said that's not quite enough for a midterm. And they moved -- they scooped Republicans into the -- Democrats into that district, scooped Republicans out, made it a near perfect gerrymander.

15 The next category of evidence which got 16 the most during this trial was the simulations. 17 Mr. Trende's simulations which he testified, I with 18 submit, very credibly those that this is an extreme outlier. Mr. Trende coded into his simulations only 19 20 traditional registering criteria, neutral criteria. 21 There was no question from the other side that any of 22 this criteria were somehow inadequate. So I'm not 23 belabor that. I think -- I think he's testified very 24 credibly.

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Now, with regard to Dr. Chen, he's

obviously a very technically proficient expert and if 1 2 he had not been forced or asked by my friends on the 3 other side to cook the books but putting into a clearly partisan factor into the simulations, I have 4 every confidence that his simulations would have 5 shown exactly what Mr. Trende showed. And while we б 7 don't have that as evidence before the Court, we've asked him, "Do you" -- "could you say that you're --8 9 that SB-1 would not be an outlier if you didn't put 10 in that oil well considerations?" He couldn't say 11 that. He feels very, very careful to say that I'm not giving any opinions that this is not a 12 13 gerrymander.

Which, by the way, in other cases he testified he has given that opinion for. And he kept saying very careful, because he's a very careful expert, that he was not going beyond that.

18 And I think the reason for that is what 19 he also testified right at the beginning of my 20 colleague's questioning, which is that the oil wells 21 constraint is not a traditional redistricting 22 criteria. And it's not a traditional redistricting 23 criteria nationwide. He didn't -- he didn't have an expertise to testify what was actually (inaudible) 24 25 criteria in New Mexico. But it's not a traditional

redistricting criteria in New Mexico, and we get that 1 2 from the testimony of Mr. Sanderoff was asked, in 50 3 years of experiencing redistricting, has he ever heard of such a thing, splitting the oil wells. 4 No. 5 And that's -- we asked, and then the attempt -- my friends attempted to kind of bolster the fact that б 7 they knew from his deposition that he was going to make that concession. So (inaudible) okay to split 8 9 only other communities of it.

And I thought what he said was very telling. He said. Yeah, you can split come communities of interest because I heard some testimony during my evolvement that the pueblos want to be split or these other folks wanted to be split in this other redistricting.

16 And then Ms. DiRago asked him, did anyone in the industry say they wanted the oil wells 17 18 to be cracked. No. I mean, he was dismissive of that. Has he heard of that in his 50 years of doing 19 20 redistricting work in New Mexico. No. So it's not a 21 traditional redistricting criteria nationwide. 22 They're own expert, Dr. Chen, said that. It's not a 23 traditional redistricting criteria in New Mexico their own expert, Mr. Sanderoff explained to you why 24 25 that is so.

1 So my friend says, well, Dr. Chen's 2 report is excluded because it's a factual question. 3 So factual question for your Honor under Justice 4 Kagan's rule book for considering simulation, is this 5 a traditional redistricting factor, or is this 6 pretext.

7 Now, the evidence that we have that it's not -- that it's pretext, it has no grounding in 8 9 New Mexico history, no grounding in New Mexico law, 10 wasn't asked for by the industry or any meaningful 11 number of people, was only even mentioned in -- and 12 we're going to quote in more detail in our proposed 13 findings, only obliquely by a couple of the very 14 folks that are accused of gerrymandering. And the 15 results of that, and Dr. Chen, after some pressing, 16 he admitted it, is to crass southeast New Mexico, which is exactly what a gerrymanderer would do. 17

18 And I thought was one exchange was very Ms. DiRago asked Dr. Chen to look at his 19 telling. 20 distributions to show, you know, where all his 3,000 21 districts. It was the thousand maps broken up by the 22 three districts. Why? And he showed and he admitted 23 that almost all those districts are -- are less than 24 50 -- or in -- in Mr. Sanderoff's problems, plus 51 25 DPI. Which means that once you bake in the clearly

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1	pretextual oil constraint, you gets only
2	gerrymanders. Almost every single map that Dr. Chen
3	produced had three Democrat districts, zero
4	Republican districts in a typical year.
5	I'm not faulting Dr. Chen. He
6	obviously, as far as we know, performed the analysis
7	with the partisan constraint that my friends fed him
8	inspect a technically competent manner. But garbage
9	in, garbage out.
10	When you force a simulation to put in a
11	partisan criteria, and as my friend said, that's a
12	factual matter. It will be your Honor's decision who
13	had the better of the factual showing about whether
14	that was a traditional redistricting criteria in
15	New Mexico or a partisan pretext. You just get
16	garbage out, and that's unfortunately what we had
17	with his (inaudible) simulations, which is mostly 3-0
18	Democrat maps.
19	And finally criteria we talked about,
20	and said this would be at least etch citizen was the
21	traditional redistricting criteria, objective ones,
22	which is the county splits and the compactness. You
23	know, this map is one of the worst in New Mexico
24	history. The considerations that they relied on most
25	heavily with that are the oil well considerations and

the way they got to beat kind of a dead horse on 1 2 that. So with all of that taken into account, 3 I will end now as I ended. Given these overwhelming 4 5 eight categories of evidence, that it is a partisan, б this is (inaudible) partisan intent, this has an 7 egregious partisan effect. And that my friends have no justification for that effect. Which would ask 8 9 your Honor to hold that this is unconstitutional (inaudible) gerrymander, and to schedule remedial 10 potion at the earliest possible time. 11 12 Thank you? THE COURT: Thank you. Who will be closing? 13 14 Ms. Sanchez? 15 MS. SANCHEZ: Yes. Thank you. There's no clock, so I'm going to try to 16 keep -- oh, thank you. I did not catch that. 17 18 Your Honor, thank you. On behalf of my 19 team here for the legislative defendants, we want to 20 thank the Court for undertaking this rather huge 21 amount of work on a very compressed scheduled on a 22 matter of first impression that's frankly important 23 to the whole state. 24 I am going to cut to the chase and just 25 jump right to the bottom line. SB-1 is not a

egregious partisan gerrymander for one very simple 1 2 Under this plan, Congressional District 2 is reason. a highly competitive, toss-up district that either 3 party can win. 4 5 By definition, not just my definition, б but Justice Kagan's definition and our state Supreme 7 Court's definition, a competitive district that either party with win is not entrenchment of the 8 dominant is, in fact, it is the opposite. 9 10 I want to read again the words of Chief 11 Justice Bacon in the opinion that was issued just last week when she's talking about entrenchment. 12 13 Again, the consequences of such entrenchment under the a partisan gerrymander include 14 15 that ensuing elections are effectively predetermined, 16 essentially removing the remedy of the franchise from a contraction individuals who's votes have been 17 18 diluted, essentially rendering the voters choice moot because it's locked in. 19 20 That's what egregious gerrymanderers do, and this map does not do that. 21 The other thing this map doesn't top is 22 23 it doesn't PAC and it doesn't crack. Again, from 24 Justice Bacon's decision in this case from last week, 25 mere in Footnote 8 of the decision, she's quoting

Justice Kagan from -- I believe from the Rucho case,
 and talking about what does packing and cracking mean
 in this context. Okay.

So the partisan gerrymanderer, quote, packs super majority of those voters into a relatively few districts in numbers far greater than needed for their preferred candidates to prevail. So their votes become wasted in those districts.

9 And then he cracks the rest across many more districts, spreading them so thin that there 10 11 candidates will not be able to win. That is what 12 cracking is, and that did not happen here because we know, looking at CD-2, from the metrics that 13 14 Mr. Sanderoff used both from the partisan performance 15 data, taking all of those considerations into play, 16 and from the endogenous races, the history of raises in CD-2 and then the race that we have under this 17 18 map, which was such an incredibly close race, a 19 toss-up race.

20 So the map under SB-2, under this map, 21 this is not what the Supreme Court is worried about. 22 The Supreme Court is worried about entrenchment such 23 that votes don't matter anymore. That's why I submit 24 to the Court that the Supreme Court's opinion talks 25 so much about the importance of the franchise, the 1 importance of the vote to our democracy, to our whole 2 system. Votes have to matter, voters should choose 3 politicians, not the other way around. And that's 4 exactly what happens in CD-2.

You heard Mr. Sanderoff, the sort of 5 6 guru of New Mexico elections and in politics tell you 7 that they expects this race to be very competitive going forward. That Mr. Vasquez is, frankly, 8 vulnerable, and we could see this district flip back 9 10 and forth election to election; somewhat as it did 11 even before redistricting. We looked at that history of CD-2 and saw, at least when Mr. Pierce isn't a 12 13 candidate, that district can go back and forth even 14 before the current lines.

So we also heard from Senator Gallegos, who testified, quite frankly and candidly that there's a problem with public voter turnout in the southern part of the state, and that he does think that that affected -- that affected the you be 2022 election.

We see that in the turnout numbers. We included that in our findings and conclusions for the Court, looking at the number of votes that -registered voters in CD-2 that just didn't come out to vote in the 2022 election.

So there clearly are other factors at 1 2 play and it's still a neck and neck race. In fact, 3 we briefly talked about here I think with Mr. Trende, and then submitted in our supplemental findings and 4 5 conclusions. Our third expert, Mr. Brace, who we didn't fly out for trial, but who submitted a lot of б 7 material to the Court, talked about a survey USA poll just from would weeks ago that find Ms. Harrell 8 leading Mr. Vasquez by about a point, 46 to 45 in the 9 10 race right now. 11 So if that was and enough, we also know that prior to SB-1, CD-2 was not a safe Republican 12 district. And Mr. Sanderoff just walked us through 13 14 that history, that a Democrat could win it and had 15 won it on two occasions in the last two cycles of 16 redistricting. So plaintiffs' don't particularly like 17 18 those facts. But no amount of text messages or 19 simulation analysis changes the political reality 20 under this map and that under the test that the 21 Supreme Court has so clearly laid out, this does knot 22 meet the test for egregious gerrymandering. 23 And a lot of the companion, I think, 24 theme to the importance of that entrenchment that the Court stresses is the danger of venturing in and 25

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decreeing something an egregious partisan gerrymander 1 2 when it is not, when in enact, it is a set of policy 3 decisions that many people vehemently disagree with. Clearly, this is a highly unpopular map in parts of 4 5 this state. But when courts get in the business of б weighing in on partisan preferences in a 7 redistricting map, when it's not eqregious to the point of being unconstitutional, to the point of 8 impairing the right to vote, then it becomes the 9 10 Court stepping in to the political fray. And that is 11 a danger that our Supreme Court, that even Justice 12 Kagan in her dissent warns against. That is not what courts should be in the business of doing. 13

That's why it's so important to ensure that if we're going to strike down a map as unconstitutional, we better be really sure that it is, in fact, egregious entrenchment under this test. And this map just doesn't satisfy that test.

I want to touch on just briefly these eight categories that plaintiffs' counsel have kind of focused on. We have heard a lot about the text string that Senator Stewart was involved in. It's been -- it's been sort of trotted out at every opportunity.

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Frankly, there's not really any new

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1 information there. We know -- we can look at the 2 maps, we can see the difference between Concept H and 3 SB-1. We can see how the partisan performance 4 numbers changed. No one is suggesting that SB-1 was 5 developed without partisan considerations. No one is 6 saying this is an agnostic map that had no partisan 7 aspect to the decision-making.

8 But that's exactly what the Supreme 9 Court has acknowledged that redistricting is an 10 inherently political exercise. It is 11 constitutionally assigned to the political branch of 12 government; of course politics are going to come into 13 play.

14 So there's really not a lot new there. 15 It may be kind of spicy to see the candid thoughts of 16 an individual lawmaker. But I think it's was 17 representative Townsend agreed, long time legislator. 18 You know, there's 112 legislators in the body. They 19 have their own reasons for supporting maps, they have 20 their own reasons for voting against maps.

21 So I would urge the Court to give 22 appropriate weight to what any one particular 23 individual has to say about their reasons for pouring 24 the map or what they were trying to do with their 25 input into the map.

Next, we heard some testimony that GOP 1 2 legislators felt sort of left out of this process. 3 But when we (inaudible) that a little bit more, you know, they clearly participated in committee hearings 4 5 and floor debates, they commented, they proposed a different plan. You know, the political reality is б 7 that the GOP is in the minority in the legislature. The governor is Democrat. And so that's probably not 8 9 the best political environment for a whole lot of 10 bipartisan compromise to happen. 11 It was very different in 2011 and 2001. 12 And, in fact, what happened, there was no enacted 13 maps because the legislature wanted to do one thing 14 the governor wanted to do another, and everybody had 15 to go to court. So it's not like it was panacea 16 before now. But that's sort of a political reality and I think not very persuasive evidence for the 17 18 Court to be able to make a decision on. The -- we've heard about change in voter 19 20 registration, composition in CD-2. We've heard 21 comparison to the Benasik case in Maryland. I qot ready for this closing pretty quickly, so I don't 22 23 have all those numbers to prepare for the Court. I 24 think the changes here are pretty significantly than 25 they were in the Benasik if you look at the full

1 picture.

2 But of course, we also heard from 3 Mr. Sanderoff that putting too much weight on voter registration composition for a whole plethora of 4 5 reasons is probably a bad idea. And what we have as б much better data to evaluate CD-2 is the political 7 performance index numbers of course the actual raise that took place and even recent polling indicating a 8 9 toss-up.

10 The next category, plaintiffs say, yeah, 11 it was a close election, they can't dispute that. 12 But in Benasik and Maryland, that -- that -- there's 13 a close raise, too. Well, if you look at Justice 14 Kagan's dissent in Rucho when she's talking about a 15 facts in Benasik, there actually had been four 16 congressional elections. And in that case -- in that situation, that district had been flipped by the 17 18 Democrats. It had been flipped from a very safe Republican district, where the -- unlike here, in 19 20 CD-2, the Republican was absolutely safe in that 21 district, and then it got flipped, and then there 22 were four elections after that, congressional 23 elections, where the Democrat won that race, sometimes by a lot, by 21 percent, I think in one 24 25 case.

So there was powerful evidence that you 1 2 had -- they took a safe Republican district and 3 turned it into a safe Democratic district. Again, 4 not the case here. 5 The unnecessary moving and shift of б voters between districts. Your Honor, the Court 7 heard from -- at least from Mr. Sanderoff and I know we've presented a bunch of information about this in 8 9 our written findings and conclusions, about the fact 10 that 2021 was the first time in 30 years that 11 New Mexico had an opportunity to have a congressional map that actually reflects the policy decisions of 12 13 the legislature; that's actually an expression of 14 policy as opposed to that sort of least change, 15 court-drawn, very conservative map where /SKWR-PBLGS 16 are in the unfortunate position of having to draw a map and saying, "I'm not a policymaker, I'm not in 17 18 the political branch, I'm in the judiciary. And so I'm going to make the fewest choices when I have to 19 20 draw the map as I possibly can. And so I'm going to 21 equal out the population. That's it. I'm going to 22 do as little as I can." 23 Well, now you have the decision back if 24 the hands of political branch. Of course they were 25 going to policy decisions that's going to reflect

1 growth and change and developments in the state that 2 have happened over 30 years. So it is not surprising 3 that we're going to see quite a bit of change in this 4 map, and there's no constitutional will requirement 5 to have a least change map.

6 Let's see. There's been a lot of talk 7 about, you know, the starting point was Concept H, and then it was -- the map was sort of transformed 8 into SB-1. I believe that -- now I'm -- even though 9 10 it's only been two days, I'm losing track of who said 11 what. But I think we heard some testimony that -- I think it was from Trende, actually, that a lot of 12 13 these districts sort of stayed the same, both from 14 their old districts, from 2011, so the cores of the 15 districts stayed the same. Mr. -- I know Mr. Brace 16 in his report testified that about 70 percent of the 17 core districts stayed the same from the 2011 map. 18 And then when you look -- when you compare Concept H to SB-1, I think it's, you know, 150, 160 precincts 19 20 that changed. So there wasn't all that much change.

Just to remind the Court, Concept H was approved by the CR C. It was one of those maps that sort of made it through the gauntlet with the CR C. And it also passed Mr. Cotrell's -- or maybe Dr. Cotrell's partisan fairness test I think he had 1 to do as part of that CRC process.

2	So the fact that Concept H was a
3	starting pointed I think really is in line with how
4	this process was supposed to work using the CRC.
5	The simulations, I'm not going to spend
6	a whole lot of time on that. There's been a lot of
7	discussion today. You know, there's I will just
8	point out, without retreading the ground, your Honor,
9	Mr. Trende's 2,040,000 maps that he testified about
10	are not testable. And we've seen why testing is so
11	important. Particularly using the kind of program
12	that he used.
13	And the other problem, the key problem
14	here, is that his maps are really not tied to any
15	reality of New Mexico. Even just taking his
16	population deviations as an example. Plus or minus
17	1 percent population deviations may not sound like a
18	big proportion of movement or allowance for
19	population and equality, but in the context of
20	congressional redistricting and the history of how
21	New Mexico has done it and what the law requires,
22	it's enormous.
23	1 percent of 700,000 people, which is

23 I percent of 700,000 people, which is 24 about how much each district should have, is 7,000 25 people. And to have a population difference of 7,000 people, or even up to 14,000 people, if you're talking about plus or minus 1 percent, is huge deviation that is in no way a map that New Mexico would ever draw or adopt or be able to enact into law. So there's disconnect between what Mr. Trende's doing and the realities of New Mexico.

7 Contrast with Dr. Chen and his simulation analysis, which actually was built to 8 9 acknowledge and recognize some of the policy choice 10 that were heard throughout the CRC, heard throughout 11 the legislative record, and incorporated to stop extent into the SB-1 map. So rather than being 12 13 disconnected from that reality of New Mexico 14 redistricting, Mr. Chen's simulations took that into 15 account. And running his analysis that he testified 16 about I think explained very capably, SB-1 is not a partisan outlier. Right? It's -- when you actually 17 18 run realistic simulations, it's actually comfortably 19 in the -- roughly in the middle of the pack.

Lastly, this sort of community of interest splitting of the oil wells concept that we've heard a lot about. The first thing that I want to say about that, we've provided it with our findings and conclusions. We didn't want to take the Court's time here to play the videos and have you

watch the floor debates and the clips that we've 1 2 pulled together. But we have provided them to the 3 Court and I think we've given video clips. 4 THE COURT: And transcripts, too. MS. SANCHEZ: And transcripts attached to 5 б our findings and conclusions. So you can -- you can 7 But it's absolutely something that was see those. discussed and debated in the legislative process. 8 9 And harkening back again to the state Supreme Court's decision from last week, I think they 10 11 gave the Court some really important guidance about this concept. I lost track of how many times 12 13 plaintiffs' counsel mentioned the phrase traditional 14 redistricting principles in his closing. But that's 15 sort of been a major argument here, by plaintiffs, is 16 that, well, this splits up a community of interest in the southeast and that violates tradition redistrict 17 18 principle, it's bad, it's a sign of a gerrymander. 19 And what the state Supreme Court told 20 us, and this is in their September 22nd opinion at 21 paragraph 46, pages 33 to 34, they talk about 22 plaintiffs' argument, because on -- when they case 23 was on appeal, there was also a lot of talk about 24 traditional redistricting criteria.

And the Court makes clear that

1 plaintiffs' reliance of tradition redistricting 2 principles is misplace; that that is not something 3 that the Court should use to analyze whether this is 4 an egregious partisan gerrymander in violation of 5 Kagan's Rucho test. And so, again, I would urge the 6 Court to take a look at paragraph 46 of their on that 7 point.

Okay. One final category that 8 9 plaintiffs really didn't address is the -- whether or 10 not the individual plaintiffs in this case, whether their votes were substantially diluted under this 11 map. We heard from one plaintiff, we heard from 12 Senator Gallegos, and while he testified that he felt 13 14 like his vote was diluted, he really didn't have any 15 evidence to important that. And, in fact, when 16 Ms. Tripp talked with him a little bit more about the 2022 election under these knew boundaries in CD-2, he 17 18 pretty much, you know, candidly talked about the lack of voter turnout amongst Republicans and that he 19 20 thought that was a factor in Ms. Harrell's loss. And 21 we haven't heard testimony or evidence regarding vote dilution of the other -- any of the other plaintiffs. 22 23 So in closing, I'm wrapping it up,

24 again, we thank the Court. This case presents really25 interesting and important issues that affect our

entire state. And the functioning of our coequal 1 2 branches of government. We are confident, your 3 Honor, that if the Court dutifully follows and 4 applies the test and quidance set forth by the state 5 Supreme Court in the September 22nd opinion, that the б Court will conclude that SB-1 is a constitutional map 7 and that the Court will deny the plaintiffs' claims. Thank you. 8 Thank you. Any rebuttal. 9 THE COURT: MR. TSEYTLIN: We've been here long enough, 10 11 your Honor. THE COURT: All right. All right. So as 12 for the findings and conclusions, since they've 13 14 already been submitted as proposals, we talked about 15 supplementing them with new information, tell me 16 about the -- you said some things have already come 17 in. 18 MR. TSEYTLIN: Yeah. We've already started receiving some discovery from (inaudible) staffer, 19 20 pretty explosive stuff. And assume with the 21 introduction that's coming, we're going to get more 22 stuff (inaudible). We obviously want the opportunity 23 to put that into our proposed findings. Obviously 24 that means the timing of the proposed findings should 25 hopefully be tied to some extent to when we can

expect to get that full production. 1 2 THE COURT: How -- how do you -- how do the 3 parties propose we're going to deal with that as far 4 as objections and... 5 Your Honor, there may be a few MR. OLSON: б things we don't know yet. (Inaudible) privilege log. 7 But, I mean, I quess with respect to those -- and we aren't going to claim -- given the Court's order, 8 9 (inaudible) Court's order, a privilege log, I mean, we'll submit them to plaintiffs. If they want to 10 11 tender them as additional evidence, I guess they can. 12 I mean, we'll be able to stipulate to where it came 13 from. 14 THE COURT: Okay. 15 MR. OLSON: So there should be any problem 16 there. All right. 17 THE COURT: 18 MR. OLSON: I do think, and identify -we've got a draft, and I'll try to get it 19 20 Mr. Harrison or tomorrow, Saturday, at the latest, of an order I think documenting what your order has 21 22 been. We'll probably do of document of record, your 23 Honor, just in case it's something the Supreme Court 24 needs to look at on the privilege issue. 25 THE COURT: All right.

MR. OLSON: But we'll do that. 1 2 THE COURT: I think -- so October 6th is the 3 deadline that I have to make a decision by. I think that -- I've got to have a cutoff date for 4 5 submissions. I -- Monday, Tuesday? б MR. HARRISON: My apologies. Are the legislative defendants going to make their production 7 by Monday; is that right? 8 9 THE COURT: I know you were talking about 10 Tuesday. Can you do it by Monday. 11 MS. SANCHEZ: I'm really pushing folks. Ι 12 mean, it's possible. It's possible. I mean --13 THE COURT: We got tomorrow. 14 MS. SANCHEZ: Literally people are still 15 searching as we speak, so I just don't know what the 16 volume is going to be. I will -- I mean, I can -- I can provide 17 18 an update tomorrow. I certainly will strive to do it Monday. I think I can safely commit to doing it, you 19 20 know, later than Tuesday, but if I can -- if I can get it earlier, I absolutely will. 21 MR. HARRISON: We don't need much lead time 22 23 in terms of if -- I would say it could be good enough 24 if they could produce by close of business on Monday. We could have our submissions done on Tuesday. 25 We

don't need tons of time with the documents. If
that's at all possible. That's what I'd like. By
Monday, that gives you three -- four days by close of
business Monday so that any supplements can be filed
by Tuesday so that I can have a decision by Friday.
THE ATTORNEY:

Q. I understand, your Honor, I guess -- I know that I will have at least a bulk of it by the close of Monday. If there's some, you know, stragglers or something, you know, I can indicate that. But I think that's fair. I will do that?

12 THE COURT: Okay. All right. I'd 13 appreciate that.

14 MR. HARRISON: And the only other thing I 15 think, quick housekeeping type things, Mr. -- so 16 we've obviously accepted our, quote, unquote, loss on Ms. Leith. Mr. Park has confirmed for husband that 17 18 Mr. Gabello was an outside advisor to the government, 19 not a government employee, but a consultant and 20 advisor on issues related to politics and policies. So I may reach out to Mr. Park and ask for 21 22 production. They were fairly willing initially to 23 produce.

And the only reason I would say that comes up is, I wanted to raise it in case the

legislative defendants have an objection. But then, 1 2 in addition, most of the documents we'll be getting 3 in will need to be -- the Ellis-Moore documents that we just got, and I hate to put them on the spot, but 4 5 if they can tell me if there's any authentication problems with those, it would be nice (inaudible). 6 7 Obviously the ones they'll be producing, I would hope we can agree to them producing them as an agreement 8 9 to authentication. And then anything that comes are 10 from Mr. Gabello. Those are the only documents that 11 we think might be coming in. 12 Obviously if we can -- if we can show 13 that production by -- all the folks are represented. 14 Mr. Vince Ward for Ellis-Moore. They were produced 15 earlier today. And then Mr. Park, for Mr. Gabello. 16 And so if we can agree to production by an attorney, we'll suffice to authenticate. (Inaudible) here to 17 18 avoid what I think are probably technical disputes. 19 MR. OLSON: (Inaudible). 20 MS. SANCHEZ: That's -- he's who produced 21 the Ellis-Moore stuff to Carter. And I think we got 22 a copy. 23 MR. OLSON: Yeah. I mean, I don't think we 24 have a problem with authentication, your Honor. We 25 just -- we just need to look at what he got from

Mr. Ward. I haven't seen it yet, but I can't imagine 1 2 there would be any problem with authentication. 3 THE COURT: All right. One last thing. Ι just -- I thought about this during closing. 4 Mr. Auh, I didn't mean to ignore you all 5 But right now, if you tell me you have б afternoon. 7 any witnesses or anything ... MR. AUH: I appreciate the thought. 8 But 9 that's just fine. 10 Okay. I apologize. THE COURT: 11 All right. So I think that that clears 12 everything up, and we'll be able to get a decision 13 out when we're supposed to. I want to thank you all 14 for excellent pleadings, excellent presentation. Ιt 15 was -- it was very good, it enjoyable, it was 16 pleasant even for as contentious as it could get, it was a pleasant experience, so I thank you all. 17 18 And if there's nothing else, we'll be in 19 recess. 20 (Proceedings adjourned 5:52 p.m.) 21 22 23 24 25

1 RE: REPUBLICAN PARTY OF NM, et al. v. TOULOSUSE OLIVER, et al. 2 3 REPORTER'S CERTIFICATE I, PAUL BACA, CCR #112, DO HEREBY CERTIFY 4 5 that the foregoing transcript was prepared from a provided audio recording, that the audio was reduced б 7 to written transcript by Kelli Gallegos, and that the foregoing pages are a true and correct transcription 8 9 of the recorded proceedings, to the best of our 10 knowledge and hearing ability. The audio quality was 11 FAIR. 12 I FURTHER CERTIFY that I am neither employed by nor related to nor contracted with (unless excepted 13 14 by the rules) any of the parties or attorneys in this 15 matter, and that I have no interest whatsoever in the 16 final disposition of this matter. 17 18 PAUL BACA 19 NEW MEXICO CCR #112 Commission Expires: 12/31/23 20 21 22 23 24 25