

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE  
STATE OF CALIFORNIA



**FILED**  
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ADMINISTRATIVE LAW JUDGES JESSICA T. HECHT and MARCELO  
POIRIER, co-presiding

Order Instituting Investigation on ) EVIDENTIARY  
the Commission's Own Motion into the ) HEARING  
Operations and Practices of Southern )  
California Gas Company with Respect )  
to the Aliso Canyon storage facility )  
and the release of natural gas, and )  
Order to Show Cause Why Southern )  
California Gas Company Should Not Be )  
Sanctioned for Allowing the ) Investigation  
Uncontrolled Release of Natural Gas ) 19-06-016  
from its Aliso Canyon Storage )  
Facility. (U904G) )

REPORTERS' TRANSCRIPT  
Virtual Proceeding  
May 3, 2021  
Pages 1748 - 1901  
Volume 13

Reported by: Doris Huaman, CSR No. 10538  
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VIRTUAL PROCEEDING

MAY 3, 2021 - 10:01 A.M.

\* \* \* \* \*

ADMINISTRATIVE LAW JUDGE HECHT: We'll be on the record. The Commission will please come to order.

This is Monday, May 3rd, and it is day, I want to say, 13 of evidentiary hearings in the Aliso Canyon OII that is I.19-06-016. We are picking up after approximately a three-week break in which I hope everybody was able to do whatever preparations they needed to do. We're going to do a few housekeeping things this morning, and then we're going to go, I believe, right into witness Neville. We'll start with swearing him in and having attestations, then we'll get going.

Just before I call on anybody for the housekeeping items, I would like to remind everybody we went through a lot of ground rules last time. I'm not going to reiterate all of them. The most important ones are to please speak slowly and clearly for the benefit of the court reporter. State and spell your name the first time you speak. We are not starting from scratch here, so transcriptwise this will come immediately

1 after our last transcript from three weeks  
2 ago, but it feels a little bit like there has  
3 been a gap, so err on the side of being  
4 careful and identifying yourself.

5 Judge Poirier, do you have anything  
6 to add before I ask for housekeeping items?

7 ALJ POIRIER: Nothing right now. Thank  
8 you.

9 ALJ HECHT: Great. Thank you.

10 Then we are going to go for a couple  
11 of housekeeping items. I understand that the  
12 attorney for SED, Mr. Gruen, would like to  
13 address something on the record.

14 So, Mr. Gruen.

15 MR. GRUEN: Thank you, your Honor. I  
16 want to be sure I'm off mute. Can you hear  
17 me, your Honor?

18 ALJ HECHT: Yes.

19 MR. GRUEN: Thank you. Your Honor, SED  
20 is aware of your Honors', the Administrative  
21 Law Judges', ruling granting SoCalGas' motion  
22 for partial reconsideration dated April 28,  
23 2021. At this time SED requests to renew its  
24 motion to quash SoCalGas' notice of  
25 deposition of Mr. Andy Holter. SED requests  
26 to make several points on the record in  
27 support of its motion to quash.

28 May we be heard on that matter?

1 ALJ HECHT: Yes, please go ahead.

2 MR. GRUEN: Okay. Thank you.

3 Your Honor, SoCalGas' deposition of  
4 Mr. Holter as a percipient witness provides  
5 nothing of value. We would note every time  
6 Mr. Holter observed the SS-25 incident at  
7 Aliso, the Aliso Canyon natural gas storage  
8 facility, he was accompanied by someone from  
9 SoCalGas.

10 Every time he was at a meeting at  
11 Aliso discussing the incident, someone from  
12 SoCalGas was there. SoCalGas controls access  
13 to the Aliso Canyon natural gas storage  
14 facility with a security entrance.  
15 Mr. Holter had to check in at the entrance  
16 every time he entered Aliso Canyon natural  
17 gas storage facility, and SoCalGas escorted  
18 him during his visits when the SS-25 leak was  
19 ongoing. In short, Mr. Holter observed the  
20 incident -- when he observed the incident,  
21 SoCalGas had someone with him observing it as  
22 well.

23 As the ALJ's March 5, 2021, ruling,  
24 granting SED's motion to quash made clear,  
25 this deposition of nontestifying advisory  
26 Commission staff is unprecedented. Deposing  
27 Mr. Holter as a percipient witness would be  
28 asking him about his observations at the time

1 he was advisory staff.

2 Also, the March 5, 2021, ruling  
3 denied SED's motion to cross-examine the  
4 third-party contractors involved with the  
5 scanning of files of SS-25 and any SoCalGas  
6 employees who oversaw the work of these  
7 third-party contractors. These are all  
8 percipient witnesses as well, and the ALJs  
9 should not allow SoCalGas' request to depose  
10 Mr. Holter in order to be consistent with  
11 denying SED's request to depose these  
12 scanners and these overseers of the scanners.

13 However, if the ALJs, the  
14 administrative law judges, choose to depart  
15 from this precedent by allowing SoCalGas to  
16 depose Mr. Holter as a percipient witness,  
17 then Safety and Enforcement Division should  
18 be allowed to cross-examine and depose  
19 SoCalGas' scanners of SoCalGas' well files  
20 and any SoCalGas employees who oversaw the  
21 work of these third-party contractors all as  
22 percipient witnesses.

23 SED made a motion to compel the  
24 appearances of these individuals, which the  
25 March 5, 2021 ruling denied, and several  
26 reasons show that allowing SED to depose and  
27 cross-examine these percipient witnesses is  
28 more compelling than allowing SoCalGas to

1       depose Mr. Holter.

2                       First, whereas SoCalGas was present  
3 with Mr. Holter to observe the Aliso Canyon  
4 leak, SED was not present to observe the  
5 scanning of SoCalGas' hard-copy well files or  
6 the actions of those who supervised them.

7                       Second, none of the violations in  
8 this proceeding rely on Mr. Holter's  
9 observations. However, in contrast,  
10 SoCalGas' reply testimony of Mr. Healy,  
11 Chapter 9, page 6, directly referenced  
12 third-party vendors who scanned the  
13 individual well files, the scanned copies of  
14 which SoCalGas disputes SED properly reviewed  
15 or discussed. This relates directly to the  
16 recordkeeping violations which are Violations  
17 327 through 330.

18                       SED asked questions of Mr. Healy  
19 during cross-examination about his claim that  
20 SoCalGas carried out a deliberative process  
21 that SoCalGas used to produce an accurate and  
22 complete electronic version of the hard-copy  
23 well files to SED and his claim that  
24 electronic production of the hard-copy well  
25 files was conducted by an experienced  
26 third-party vendor who scanned them in the  
27 ordinary course of business and was unable to  
28 answer them. To date, SoCalGas has refused

1 to even provide SED with the name of the  
2 scanners or their supervisors, with any of  
3 those names.

4 So to that end, at this time SED  
5 moves that the ALJs reconsider -- it -- well,  
6 to that end, we would request that the ALJs  
7 deny the request to depose Mr. Holter. But  
8 in the event that the ALJs grant the request,  
9 SED would move to reconsider the denial of  
10 SED's motion to compel appearance of the  
11 SoCalGas third-party contractors involved  
12 with the scanning of files for SS-25 and any  
13 SoCalGas employees who oversaw the work of  
14 these third-party contractors.

15 All of these individuals should be  
16 crossable and subject to SED depositions in  
17 the event that percipient witnesses are now  
18 fair game. We have a request. If your  
19 Honors are considering granting the motion,  
20 we would have a request for some limiting  
21 instructions as well.

22 First of all, in the instance that  
23 your Honors grant the deposition of  
24 Mr. Holter as a percipient witness, SoCalGas  
25 should be required to do data requests of  
26 Mr. Holter's observation instead. That would  
27 be the first thing we'd ask if you're still  
28 considering granting the motion.

1           In her June 10, 2002, ruling on a  
2 pre-trial motion in an Order Instituting  
3 Investigation related to Pacific Bell and  
4 Verizon California, Incorporated, ALJ Sarah  
5 Thomas allowed for the taking of ORA  
6 depositions only after she determined that  
7 ORA did not provide a reasonable response to  
8 Pacific Bell's discovery.

9           To SED's knowledge, SED has not  
10 received specific data requests about  
11 Mr. Holter's observations about Aliso Canyon.  
12 SED offered to respond to data requests of  
13 Mr. Holter as an alternative to a deposition,  
14 and SoCalGas stated in response on  
15 October 23, 2020, when this issue was going  
16 on that, quote, "SoCalGas does not agree to  
17 SED's proposal to conduct more written  
18 discovery in lieu of deposition of  
19 Mr. Holter," end quote.

20           In that e-mail, SoCalGas espoused  
21 the view that a deposition would be more  
22 efficient than discovery, but SoCal did not  
23 dispute that data requests would achieve the  
24 same result as a deposition. Also, with  
25 regards to limiting instructions, SED would  
26 request, if a deposition is granted, that  
27 Mr. Holter's deposition be limited to 90  
28 minutes. This is consistent with Commission

1 precedent.

2 Limiting depositions of ORA  
3 witnesses to 90 minutes per deposition, which  
4 would follow the precedent, again by ALJ  
5 Thomas' June 10, 2001, ruling -- and the  
6 investigation number is 01-09-002 at page 5  
7 of the ruling.

8 Given that SoCalGas observed the  
9 leak when Mr. Holter did and that SoCalGas  
10 was present at each meeting at Aliso Canyon  
11 that Mr. Holter attended, this should be more  
12 than adequate time to do an exercise of staff  
13 that has never experienced such an exercise  
14 before and, unlike the other witnesses that  
15 SoCalGas and SED have offered in this  
16 proceeding, did not volunteer to answer  
17 questions in this fashion.

18 Nonetheless, this should be plenty  
19 of time to inform SoCalGas of the purpose of  
20 the ALJ's ruling, which is to inform a basis  
21 to request additional hearings. It's limited  
22 to that.

23 SED also requests, just to ensure  
24 timing in the event that a deposition is  
25 granted, that SoCalGas be required to depose  
26 Mr. Holter within three weeks of the end of  
27 hearings and bring its motion for additional  
28 dates of formal hearings within one week of

1 the completion of the deposition. That  
2 should allow SoCalGas sufficient time to do  
3 its deposition and pursue additional hearings  
4 in the event that the request for a  
5 deposition is granted.

6 That's all we have to say as part of  
7 our motion, your Honor. Thank you.

8 ALJ HECHT: Thank you very much.

9 I am guessing that SoCalGas would  
10 like to respond to that. I could also give a  
11 brief response and then return to SoCalGas.

12 Does SoCalGas have anything that  
13 they want to say immediately?

14 MR. STODDARD: Yes, your Honor. We'll  
15 try to keep it brief. I think the threshold  
16 point we're going to make here may help  
17 shorten it.

18 The judge's ruling directed -- you  
19 know, generally it's somewhat unusual to have  
20 another motion to quash in this instance when  
21 this issue has been fully briefed, frankly, a  
22 number of times, both in SED's motion for  
23 protective order, also a motion to quash, and  
24 I believe there are also some pending motions  
25 to compel that address this issue as well.

26 The ALJ's ruling specifically  
27 allowed SED to file a motion -- to renew its  
28 motion to quash to be filed and served with a

1 detailed explanation addressing potential  
2 privilege arguments. Although a number of  
3 points were raised by counsel of SED just  
4 now, I don't believe any of those points  
5 related to privilege and, instead, seemed to  
6 be an offer of compromise.

7 On that basis, I believe that the  
8 motion that SED just presented exceeds the  
9 scope of the motion as permitted by the ALJ  
10 ruling, which was appropriately narrow  
11 because of the fact that this issue has been  
12 so extensively briefed a number of times.

13 I would further note that some of  
14 the kind of compromised proposals that SED  
15 has just proposed were already raised in  
16 prior filings, including the idea that data  
17 requests could somehow displace the need for  
18 a deposition, which would be the most  
19 efficient path for obtaining this discovery.

20 And then there are also a number of  
21 other points, frankly, if we need to go point  
22 by point to respond to SED's arguments, that  
23 we would like to present. Given that SED  
24 appeared to be reading this into the record,  
25 we think that the procedure that should be  
26 followed here is as instructed by the ALJs,  
27 which is the motion should be filed and  
28 served, and SoCalGas, to the degree that it's

1 appropriate because new arguments are being  
2 raised, including some of the arguments that  
3 SED raised just now, should be permitted an  
4 opportunity to respond with a response that  
5 would be filed and served at a time  
6 determined by the administrative law judges.

7 Your Honors, I will pause now for  
8 comments from your Honors. However, to the  
9 degree that we need to address the other  
10 arguments, we would ask for an opportunity to  
11 do so in writing. ]

12 ALJ HECHT: Thank you. All right. Is  
13 there any other comment before I talk about  
14 this and then move forward? Doesn't look  
15 like it.

16 MS. BONE: Yes, your Honor.

17 ALJ HECHT: Yes.

18 MS. BONE: Cal Advocates -- Traci Bone  
19 for Cal Advocates. And we do support the SED  
20 motion.

21 ALJ HECHT: Thank you. All right.  
22 With that, I will first go back to the SED  
23 motion from last October. That motion did  
24 contemplate a situation in which its motion  
25 to quash were not granted, that many of the  
26 compromised provisions that were just stated  
27 should be put in place including the  
28 90-minute limit and other things like that.

1 All of those proposals have been considered.

2 We are finding that according to  
3 Rule 10.1 on discovery from parties, the  
4 subject matter is relevant to what is  
5 involved in the proceeding and is either  
6 itself admissible in evidence or appears  
7 reasonably calculated to the discovery of  
8 admissible evidence. What we asked for in  
9 our ruling was discussions about privilege.  
10 What specific privilege beyond, we don't just  
11 do that. You would claim -- and you are  
12 certainly welcome to file a ruling if that  
13 provides that sort of information -- provide  
14 a motion -- sorry -- that provides sort of  
15 information contemplated in the ruling. I  
16 would refer at this time back to SED's  
17 original motion from October 27th, which had  
18 a section called Deposition from a  
19 Non-Testifying Advisory Staff Person should  
20 be the exception not the rule. This is the  
21 exception. So that is where we are.

22 If you want to file a ruling -- file  
23 a motion, you are very welcome to do that,  
24 and the motion should include specific  
25 arguments about privilege.

26 MR. GRUEN: Your Honor, I'm seeing you  
27 pause. Do you want to continue? I just want  
28 to be sure I'm tracking you and waiting until

1 your Honor is done. Or do you want a  
2 response from SED? What would your druthers  
3 be?

4 ALJ HECHT: I think a response from SED  
5 would be fine at this point. I don't expect  
6 to have a prolonged discussion on this this  
7 morning, but you are welcome to respond.

8 MR. GRUEN: Thank you, your Honor. I  
9 appreciate that. I would just say in terms  
10 of SoCalGas' characterization that this is a  
11 compromise, I would dispute that. SED --  
12 this is -- this was part of our motion, and  
13 it was considered as an alternative. I  
14 appreciate your Honor's noting the  
15 observations and calling this an exception.

16 Your Honors, the only thing we  
17 contemplate here -- this is the motion we are  
18 focusing on preparing for hearings and don't  
19 intend to file anything on Wednesday. We  
20 prepared oral talking points to see if we  
21 could have an oral discussion, an oral  
22 argument. What we would ask is just that  
23 if -- since it sounds like your Honors are  
24 considering this is the exception, we would  
25 then renew our motion that your Honors also  
26 reconsider allowing SED to depose both the  
27 scanners as well as the individuals who  
28 oversaw the scanners. Those indeed are

1 percipient witnesses as well. SoCalGas  
2 should be required to turn over the names of  
3 all of those individuals to SED so SED can  
4 move forward forthrightly.

5           And we would ask as well if, just  
6 for clarity, about -- that the limiting  
7 instructions, which your Honor noted, were  
8 provided in SED's October motion, that all of  
9 those be granted as well so that we can move  
10 through the discovery properly. If we can do  
11 that, the data requests, and if not, that  
12 there be appropriate limiting instructions  
13 for the deposition itself. I appreciate it  
14 and thank you, your Honor. Appreciate it.

15           ALJ HECHT: All right. I will say that  
16 I have not heard anything as yet that is new  
17 beyond what was in the original motion to  
18 quash. We have reconsidered the motion to  
19 quash and issued the ruling that we issued.  
20 Without hearing something due specifically  
21 with regard to privilege, it is unlikely that  
22 we're going to make a change here. We can  
23 discuss some of these other subsidiary  
24 issues, but what the ruling states is that  
25 Mr. Holter -- unless you prevail in a renewed  
26 motion with, I might add, new information,  
27 that Mr. Holter can have a deposition. It  
28 will not be limited to 90 minutes. And it

1 will be as a percipient witness, which, as  
2 far as I was concerned, was the main  
3 provision requested by SED. The other issues  
4 are not, strictly speaking, relevant to this.  
5 But out of an abundance of caution, I'm going  
6 to take us off the record in a minute, and my  
7 cosigned ALJ and I will discuss it, and then  
8 we can get back to you after a short break.

9 Before I do that, is there anything  
10 that either Mr. Gruen or Mr. Stoddard would  
11 like to say to inform that discussion?

12 Mr. Stoddard.

13 MR. STODDARD: Yes, your Honor. The  
14 one other item, which I didn't address  
15 before, but to the degree that its being  
16 considered as part of this discussion, SED's  
17 motion to quash included a request, I  
18 suppose, that related to the scanners, and I  
19 would simply note that Mr. Gruen noted both a  
20 deposition as well as an appearance at  
21 hearings. This is not procedurally  
22 appropriate for a motion to quash. And the  
23 prior request from SED on that is simply for  
24 the scanners to appear at hearings. It  
25 wasn't for a deposition. So this is a new  
26 request. There's no deposition that's been  
27 noticed. There's no pending motion to compel  
28 on this issue. SoCalGas would oppose that

1 request for the grounds that it previously  
2 opposed it.

3 Separately, as to the limiting  
4 items, SoCalGas opposes limitations on this  
5 deposition both as to time and as to -- you  
6 know, again, we're not going to be deposing  
7 Mr. Holter as an expert in any context. So  
8 it would be deposing him as a percipient both  
9 as to the league as well as to work he did  
10 related to the league. To the degree that,  
11 you know -- as noted by your Honor, to the  
12 degree that there are any objections as to  
13 specific questions, they can be raised at the  
14 deposition.

15 ALJ HECHT: Thank you. And I'm  
16 assuming that Mr. Gruen would like to respond  
17 to that before we take our break.

18 Go ahead, please.

19 MR. GRUEN: Thank you, your Honor. I  
20 just note that this is putting form over  
21 substance. What SED's request is is to be  
22 able to depose the scanners. It is a motion  
23 to be able to both depose and cross-examine  
24 the scanners and the overseers of the  
25 scanners. They are percipient witnesses just  
26 like Mr. Holter is. So we are putting a  
27 motion at this time to have access to the  
28 scanners, have SoCalGas identify them in

1 order to facilitate whether SoCalGas properly  
2 recorded and -- electronically recorded the  
3 records, the safety-related records that  
4 SoCalGas says was part of its well files. We  
5 should be allowed to do that as well.

6 Thank you, your Honor.

7 ALJ HECHT: Any other comments?

8 Yes, Mr. Stoddard.

9 MR. STODDARD: Thank you, your Honor.  
10 Briefly as to the scanners, Mr. Gruen  
11 characterizes form over substance, however,  
12 legal procedure is important. And in this  
13 instance, he's seeking SoCalGas -- you know,  
14 he's asking SoCalGas essentially to compel  
15 the appearance of individuals who worked for  
16 a third-party vendor. The Commission and its  
17 staff and SED has the authority to compel  
18 appearances of third-parties. To the degree  
19 that SED wants to seek discovery from an  
20 entity, they can do so. And there's a  
21 procedure for doing that, and it is not form  
22 over substance. It is legal procedure.  
23 SoCal -- doing it through SoCalGas is neither  
24 appropriate nor procedurally proper and nor  
25 is it the most efficient way to do it.

26 To the degree that's necessary,  
27 however, again, you know, this is beyond the  
28 scope -- this subject is simply beyond the

1 scope of the ALJs' ruling which directed SED  
2 to file a limited renewal of its motion to  
3 quash.

4 And again, SED appears to be turning  
5 this into kind of a negotiation for  
6 compromise rather than simply addressing the  
7 substance of their previously alleged  
8 privilege claims.

9 Thank you, your Honor.

10 ALJ HECHT: Yes, Mr. Gruen.

11 MR. GRUEN: Your Honor, this is not a  
12 negotiation. This is SED asking that the  
13 rules be applied the same way. And with  
14 regard -- so that SED be allowed to depose  
15 percipient witnesses. With regards to Mr.  
16 Stoddard's suggestion that SED should have to  
17 go around SoCalGas, depose its own contractor  
18 separately, that also flies in the face of  
19 case law. SoCalGas obviously has provided --  
20 it provided Boots & Coots, another  
21 contractor.

22 With regards to examinations under  
23 oath, its providing for its intended  
24 witnesses as well. There are -- there is  
25 case law on point, which I believe is  
26 Schneider. And the entire case name fails me  
27 at the moment, but this was Supreme Court --  
28 California Supreme Court precedent that

1 applies the same rules to SoCalGas and other  
2 utilities' contractors as it does to  
3 SoCalGas. And my understanding of the  
4 rationale for it is that SoCalGas and others  
5 cannot contract its way out from under the  
6 rules. This is no different than if SoCalGas  
7 had its own employees scanning the documents.  
8 We would ask SoCalGas to produce them as  
9 well. To suggest that it's not procedurally  
10 appropriate is frankly not appropriate on  
11 SoCalGas' part. They should be required to  
12 produce their own contractors for deposition  
13 and the scanners.

14 Thank you, your Honor.

15 ALJ HECHT: I'm going to repeat  
16 something that I think I said a couple  
17 minutes ago and that is that I don't see  
18 these requests as necessarily being  
19 connected. The motion for reconsideration  
20 and that ruling has been addressed.  
21 Questions about scanners or other third-party  
22 contractors would be addressed on their  
23 merits. I think it's fairly clear in the  
24 ruling that we put out last week that if  
25 SoCalGas were to find any information that  
26 they believe is relevant and would require  
27 hearings that they would need to file a  
28 separate motion to request those hearings,

1 and we would examine that motion on its own  
2 merits. So that's what we're looking at.

3 Any brief responses before I take us  
4 off the record?

5 (No response.)

6 ALJ HECHT: Okay. I'm not seeing any.  
7 So I am going to take a 10-minute break, and  
8 we'll come back at 10:38. We'll be off the  
9 record.

10 (Off the record.) ]

11 ALJ HECHT: We'll be back on the  
12 record.

13 We are back after our ten-minute  
14 break in which Judge Poirier and I consulted  
15 on this issue.

16 These -- the motion for  
17 reconsideration was considered in great  
18 detail, and -- and the ruling that we issued  
19 had a great deal of thought go into it. In  
20 the absence of new information, I do not see  
21 that ruling changing. If SED would like to  
22 provide specific arguments related to  
23 privilege, SED can provide those arguments  
24 either orally, at some point, or preferably,  
25 in writing by Wednesday, and it should be  
26 something specific beyond simply advisory  
27 staff people don't testify, because, as I  
28 noted from -- from SED's motion in the first

1 place, it is the exception, not the rule; and  
2 it is not the rule. And this particular  
3 situation was considered in great detail to  
4 get here. So if you want to provide that,  
5 you are very welcome to provide that. It is  
6 as a percipient witness, which is one of the  
7 main things that SED asked for as a  
8 condition. There will not be a 90-minute  
9 time limit. It is my experience with these  
10 hearings that we can argue about a single  
11 objection for half an hour. So I just don't  
12 see that as being a useful timeframe. So  
13 that's pretty much where we are.

14 As far as the issues with the  
15 scanning and the third-party contractor, that  
16 is a separate issue, and if you would like to  
17 submit that or resubmit that as a motion, it  
18 would be something that we would look at on  
19 its own merits. And what I'm looking at is  
20 Rule 10.1, any party may obtain discovery  
21 from any other party regarding any matter not  
22 privileged that is relevant to the subject  
23 matter involvement in the proceeding, if the  
24 matter is either itself admissible in  
25 evidence or appears reasonably calculated to  
26 lead to the discovery of admissible evidence,  
27 unless the burden, expense or intrusiveness  
28 clearly outweighs the likelihood that the

1 information sought will lead to discovery.

2 So that is what we would be doing.  
3 The ruling okay's a deposition. It does not  
4 say that we will necessarily have hearings.  
5 That depends on what, if anything, is found  
6 in that deposition. And other motions,  
7 including for people who scan documents or  
8 something else, would be assessed on their  
9 own merits, which would have to have  
10 something to do with what I just read.

11 Are there any other questions on  
12 this issue?

13 (No response.)

14 ALJ HECHT: All right. With that  
15 resounding silence, I'm going to ask: Are  
16 there any other housekeeping matters or  
17 anything that people would like to address  
18 before we get started with our new witness?

19 (No response.)

20 ALJ HECHT: Okay. That being the case,  
21 it is time to call Witness Neville, I  
22 believe. And we will swear in that witness,  
23 we will have him give his direct, and then we  
24 can pick up with the cross-examination.

25 I am going to, for a moment, go off  
26 the record. So off the record.

27 (Off the record.)

28 ALJ HECHT: We'll be back on the

1 record.

2           Now that we're back on the record, I  
3 am going to swear you in, and ask you to  
4 agree to a number of attestations, which we  
5 have had all of the witnesses agree to, so  
6 far. The attorneys have given similar  
7 largely overlapping attestations that they  
8 have made and have agreed to abide by. I  
9 think the attorney doing your direct has  
10 already made those, so that's not an issue.  
11 But, anyway, I'm going to read a list of a  
12 number of different things, and ask you, at  
13 the end, whether you agree. And then you can  
14 tell me.

15           So as a witness, do you solemnly  
16 state under penalty of perjury that the  
17 testimony you give in the case now pending  
18 before this Commission shall be the truth,  
19 the whole truth and nothing but the truth,  
20 you attest that you will testify based on  
21 your own knowledge and memory, free from  
22 external influences and pressures, do you  
23 attest that you will adhere to all formal  
24 requirements of testifying under oath,  
25 including the prohibition against being  
26 coached, do you attest that you will only  
27 refer to materials provided by the parties,  
28 exhibits premarked and identified by the

1 parties and previously shared with the  
2 opposing party, do you attest that you will  
3 not make any recording of the proceedings,  
4 do you attest that you understand that any  
5 recording of the proceeding held by Webex,  
6 including screenshots or other visual copying  
7 of the hearing, is absolutely prohibited, do  
8 you attest that you understand that a  
9 violation of these prohibitions may result in  
10 sanctions, including removal from the  
11 evidentiary hearing, restricted entry to  
12 future hearings, denial of entry to future  
13 hearings, or any other sanctions deemed  
14 necessary for the Commission, and finally, do  
15 you attest that you will not engage in any  
16 private communications by phone, text, email,  
17 or any other mode of communication while  
18 under oath and (inaudible)?

19 DAN NEVILLE, called as a witness by  
20 Southern California Gas Company, having  
been sworn, testified as follows:

21 THE WITNESS: Yes, I do, your Honor.

22 ALJ HECHT: Thank you very much.

23 Then I will say you can pick up with  
24 direct.

25 MR. LOTTERMAN: Thank you, your Honor.

26 DIRECT EXAMINATION

27 BY MR. LOTTERMAN:

28 Q Mr. Neville, would you state your

1 full name for the record, and spell it?

2 A Dan Neville. D-a-n, last name is  
3 N-e-v-i-l-l-e.

4 Q What is your current business  
5 address?

6 A 12801 Tampa Avenue, Northridge.

7 Q Mr. Neville, have you testified  
8 before the CPUC before?

9 A I have not.

10 Q Okay. Well, what we do first --  
11 and this is my first time, actually, too.

12 But, what we do first is we --  
13 we'll mark your testimony, and then I will  
14 make you available for cross-examination.

15 Do you have your -- a copy of your  
16 testimony before you?

17 A Yes, I do.

18 Q All right. Let's turn to what's  
19 been marked as SoCalGas-01. Do you see that?

20 A Yes.

21 Q Okay.

22 And for the record, your Honor,  
23 SoCalGas-01 is entitled "Chapter 1 Prepared  
24 Opening Testimony of Dan Neville on Behalf of  
25 Southern California Gas Company, U904G," and  
26 in parens it says, "Operations and  
27 Maintenance Practices Pertaining to Well  
28 SS-25 at Aliso Canyon," and it's dated

1 November 22, 2019.

2 Mr. Neville, would you turn now to  
3 SoCalGas Exhibit-15?

4 A Okay.

5 Q Do you have that in front of you?

6 A Yes.

7 Q Okay.

8 And for the record, SoCalGas  
9 Exhibit 15 is entitled "Chapter 7 Prepared  
10 Reply Testimony of Dan Neville on Behalf of  
11 Southern California Gas Company, U904G," and  
12 it's dated March 20, 2020.

13 Let's turn to Exhibit 16,  
14 Mr. Neville.

15 A Okay.

16 MR. LOTTERMAN: Exhibit 16, for the  
17 record, are the Exhibits to Prepared Reply  
18 Testimony of Dan Neville dated March 20,  
19 2020.

20 Q Turn to Exhibit 21, Mr. Neville.

21 A Okay.

22 MR. LOTTERMAN: Okay. And for the  
23 record, your Honor, Exhibit 21 is entitled  
24 "Chapter 1 Prepared Sur-Reply Testimony of  
25 Daniel Neville on Behalf of Southern  
26 California Gas Company, U904G," and that's  
27 dated June 30, 2020.

28 Q And finally, Mr. Neville, let's

1 turn to exhibit -- SoCalGas Exhibit-22.

2 A Okay.

3 MR. LOTTERMAN: And for the record,  
4 this -- these are the Exhibits to Prepared  
5 Sur-Reply Testimony of Dan Neville dated  
6 June 30, 2020.

7 Q Mr. Neville, were these documents  
8 prepared by you or compiled at your  
9 direction?

10 A Yes.

11 Q Do you adopt them as your testimony  
12 in this proceeding?

13 A Yes.

14 Q How long have you worked at  
15 SoCalGas?

16 A Since 1991; so that would be, what,  
17 30 years.

18 Q Okay. And could you just briefly  
19 describe your general titles and capacities  
20 in those 30 years?

21 A So I started as a staff engineer in  
22 1991, and then moved on to various positions  
23 within storage, including drilling and  
24 workover engineer, a storage field engineer,  
25 a storage operations manager, and a reservoir  
26 engineer manager. And that's my present  
27 title right now, is reservoir engineering  
28 manager.

1           Q    And what is your educational  
2 background?

3           A    I graduated in 1982, Texas A&M  
4 University, with a bachelor's in petroleum  
5 engineering.

6           MR. LOTTERMAN: Your Honor, Mr. Neville  
7 is available for cross-examination.

8           ALJ HECHT: All right. I think we're  
9 ready for Mr. Gruen. Go ahead.

10          MR. GRUEN: Thank -- thank you, your  
11 Honor.

12                                   CROSS-EXAMINATION

13 BY MR. GRUEN:

14          Q    Good morning, Mr. Neville. It's --  
15 it's been a little while, but I remember -- I  
16 remember you in the examination under oath  
17 that we did together several years ago.

18                   And just to round out  
19 Mr. Lotterman's direct, just a couple of  
20 points with all the documents that were just  
21 marked, where you provide facts in those  
22 testimony, are those facts true and correct,  
23 to the best of your knowledge?

24          A    Yes, they are, to the best of my --  
25 my knowledge.

26          Q    Okay. And where you provide  
27 opinions or conclusions, are those opinions  
28 or conclusions, both of those, based upon

1 your best -- best professional judgment?

2 A Yes, I would say that -- that's the  
3 case, yes.

4 Q Okay. Thank you. Okay. So with  
5 that, as her Honor mentioned, my name is  
6 Darryl Gruen. I'm an attorney on behalf of  
7 the Safety and Enforcement Division in this  
8 proceeding; just a couple of questions to --  
9 to start maybe to lay a bit of a basis, and  
10 also establish common understanding of terms.

11 I want to ask you, first of all:  
12 Are you alone as you testify?

13 A Yes.

14 Q Okay. And are you able to  
15 communicate separately or privately with  
16 anyone while you communicate through the  
17 Webex connection you have to the hearings  
18 here today?

19 A No, I'm -- I'm not able to  
20 communicate with anyone.

21 Q Thank you. And do you consent to  
22 allow anyone to record or in any way  
23 transcribe your testimony in this proceeding  
24 other than the court reporters that have been  
25 approved by the California Public Utilities  
26 Commission?

27 A I do not.

28 Q Okay. Mr. Neville, if I press your

1 memory, please feel free to say you don't  
2 recall. And if you don't know, please let me  
3 know, and I will take that and move on. Do  
4 you understand?

5 A Yes.

6 Q Okay. And when -- just a couple of  
7 com -- terms to establish a basic  
8 understanding, if we could.

9 When we talk about Blade today, if  
10 you or I use that term, can we agree we're  
11 referring to Blade Energy Partners?

12 A Yes, we can.

13 Q Okay. And when we agree -- I'm --  
14 excuse me.

15 When we talk about the Aliso Canyon  
16 natural gas storage facility, the Aliso  
17 Canyon facility or Aliso, can we agree that  
18 we're talking about Southern California Gas  
19 Company's Aliso Canyon natural gas storage  
20 facility?

21 A Yes.

22 Q Thank you. And when we use the  
23 term root cause analysis, or RCA, would you  
24 agree that we can -- can we agree that that  
25 refers to Blade's root cause analysis and  
26 supplemental reports issued in May of 2019?

27 A Yes, we can.

28 Q Thank you. And SS-25 refers to

1 Standard Sesnon 25 well, the Standard Sesnon  
2 25 well at Aliso. Would you agree to that?

3 A Yes.

4 Q Okay. Thank you. All right.

5 So -- and, oh, excuse me, one more.

6 With regards to the term, incident,  
7 would you agree when we use that term that  
8 refers to the release of gas from the SS-25  
9 facility that was discovered beginning  
10 October 23rd, 2015? Would you agree to that  
11 understanding, as we use that term?

12 A Yes.

13 Q Thank you. All right. If we could  
14 turn to your -- to Exhibit SoCalGas-01, as  
15 Mr. Lotterman identified, your opening  
16 testimony, and go to the page with witness  
17 qualifications -- and I believe -- let me  
18 just enlarge my screen so I can see. And on  
19 there, we have, at the bottom, if we could go  
20 there just to read into the record the Bates  
21 number, SoCalGas-1.0010, and then turning to  
22 line 17, so we scroll down a little bit,  
23 there you say beginning in November 2015, you  
24 began providing assistance concerning various  
25 tasks related to the October 23rd, 2015 leak  
26 at SS-25. Do you see that?

27 A Yes.

28 Q At a high level, could you outline

1 those tasks, please?

2 A My tasks were related to the --  
3 the -- the various data requests that we were  
4 receiving from different organizations, from  
5 different regulatory organizations. That was  
6 primarily my responsibility. ]

7 Q And in order to provide data  
8 responses, how did you gather information in  
9 order to provide the response that you did?

10 A I would typically use the Aliso  
11 Canyon well files as a primary source.

12 Q Okay. Any other sources of  
13 information?

14 A Most likely our PI operations,  
15 computer software called "PI" that we use --  
16 that we have operations data on.

17 Q Okay.

18 A And that's all I could think of  
19 right now.

20 Q Okay. Did you talk to anyone in  
21 order to inform the data responses that we  
22 provided?

23 A Over the time period -- yes, I did.

24 Q Can you recall who you talked to?

25 A Yes. I spoke with a number of  
26 different people within SoCalGas, some of the  
27 engineers that worked there in the field, and  
28 I did utilize an outside contractor for

1 support on one particular aspect of one data  
2 request.

3 Q Did you talk to any of the  
4 well-kill contractors or anyone who was  
5 responsible for doing well-kill operations in  
6 order to inform data responses?

7 A I did not, to my knowledge or  
8 memory, deal with well-kill responses.

9 Q And your --

10 A And the answer would be no, I don't  
11 recall.

12 Q You didn't -- okay. Just to be  
13 clear because I think we were maybe talking  
14 past each other -- you didn't talk -- your  
15 testimony is you didn't talk to anyone who  
16 worked on well-kill operations of Well SS-25  
17 in order to inform the data responses that  
18 you provided; is that correct?

19 A That's correct.

20 Q Okay. Mr. Lotterman asked you on  
21 direct about -- clarified that you had not  
22 testified before the Commission before as I  
23 understood. I just wanted to elaborate on  
24 that. Have you testified before any other  
25 court or other tribunal before?

26 A No, I have not.

27 Q Okay. Mr. Neville, I'd like to  
28 explore your records management background

1 which underlies your testimony regarding  
2 SoCalGas' recordkeeping practices.  
3 Specifically, we'll turn to a page of your  
4 reply testimony, SoCalGas Exhibit 15 here.  
5 So if we could pull that up, and if we go to  
6 Bates stamp 15.0003, we have it up there. If  
7 we go to line 13, you state, if I'm reading  
8 correctly there:

9 As demonstrated below, SoCalGas'  
10 recordkeeping practices provide an  
11 efficient means for the operation  
12 and maintenance of the Aliso  
13 Canyon gas storage facility and  
14 did not cause unsafe conditions.  
15 In addition to my experience with  
16 SoCalGas recordkeeping  
17 practices --

18 And then you continue on. Do you  
19 see that?

20 A Yes.

21 Q Okay. Are you familiar with the  
22 term "records management"?

23 A Yes.

24 Q What does the term "records  
25 management" mean?

26 A I think in a general sense it  
27 refers to how records and what types of  
28 records are stored in the various locations

1 for records to be kept.

2 Q Okay. I'm sorry, I didn't want to  
3 interrupt. Did you have more to add?

4 A No.

5 Q Okay. Let's turn to the next  
6 exhibit if we could.

7 And I'll just ask you, Mr. Zarchy,  
8 if you could -- yeah, if we could pull up --  
9 all right, we'll start there, just leave it  
10 there for a second.

11 Are you familiar with an ISO  
12 standard from 2001 that defines records  
13 management as, quote:

14 The field of management  
15 responsible for the efficient and  
16 systematic control of the  
17 creation, receipt, maintenance,  
18 use, and disposition of records,  
19 including a processes for  
20 capturing and maintaining evidence  
21 of and information about business  
22 activities and transactions in the  
23 form of records.

24 A So was the question am I familiar  
25 with that ISO standard?

26 Q And the specific definition of  
27 records management that that standard  
28 provides, yes.

1           A    I -- no, I'm not familiar with the  
2           standard.  No.

3           Q    Okay.  Thank you.  And when you  
4           talk about your experience with SoCalGas'  
5           recordkeeping practices, are you using any  
6           sort of standard in the industry such as the  
7           ISO standard I just mentioned that comes from  
8           2001?

9           A    So we're talking about the  
10          hard-copy well file system, you know, which  
11          was established quite early on in the  
12          operations of the field.  I'm not familiar  
13          enough to know what that -- if there's a  
14          specific, you know, industry standard with  
15          regard to how well files are stored.  I don't  
16          suspect they are -- there is, but I would  
17          probably be speculating by saying that.

18          Q    Okay.  Are you aware that in the  
19          San Bruno Recordkeeping Order Instituting  
20          Investigation, Ms. Margaret Felts was part of  
21          a team, including records managers who  
22          evaluated Pacific Gas and Electric, or  
23          PG&E's, records management including the  
24          recordkeeping?

25          A    Am I aware that -- only from  
26          testimony provided in hearings of Mrs. Felts.

27          Q    I see.  Okay.  Are you aware that  
28          PG&E itself provided a records manager who

1 evaluated PG&E's records management practices  
2 and testified to them?

3 A No.

4 Q Okay. Let's turn to the witness  
5 qualifications that you've included with your  
6 reply testimony, SoCalGas Exhibit 15, if we  
7 could. Your qualifications begin on the page  
8 with Bates Number 15.0021, so if we could go  
9 there.

10 It's toward the end of this  
11 document, I believe. If we could just scroll  
12 to the bottom of that page to be sure we have  
13 the right one. Thank you. Great.

14 So let's go to lines 5 through 9.  
15 There you talk about working in "Integrity  
16 Management and Strategic Planning." If I'm  
17 understanding that passage correctly, your  
18 responsibilities include "assisting SoCalGas  
19 in implementing both" D-O-G-G-R, or DOGGR,  
20 "and Pipeline and Hazardous Material Safety  
21 Administration," or P-H-M-S-A, or "PHMSA  
22 regulations at all of SoCalGas' natural gas  
23 storage facilities"; is that right?

24 A Yes.

25 Q I want to ask you about your role  
26 in implementing the PHMSA regulations at  
27 natural gas storage facilities. Are you  
28 familiar with Title 49 of the Code of Federal

1 Regulations, Part 192?

2 A I am not.

3 Q Okay. What about the rule related  
4 to underground natural gas storage that was  
5 recently added with regards to underground  
6 natural gas storage facilities from Aliso  
7 Canyon natural gas storage facility? That's  
8 the specific. As I understand it, it's  
9 called the "Mega Rule.

10 Have you heard about that before?

11 A I've heard the term "Mega Rule,"  
12 yes.

13 Q Okay. What's your familiarity with  
14 the Mega Rule?

15 A To be honest, very little. It's  
16 just not something I've had involvement in  
17 other than hearing it mentioned within our --

18 Q Did you --

19 A -- work team.

20 Q I see. Did you understand that it  
21 related to pipeline safety and the safety of  
22 underground natural gas storage facilities?

23 A I don't honestly know that it  
24 related to both pipeline and underground  
25 storage.

26 Q Okay. So you wouldn't -- just to  
27 clarify, if we showed you a document of it,  
28 you've not seen a document of -- that shows

1 any part of the Mega Rule.

2 Am I understanding that correctly?

3 A Yes, that's correct.

4 Q Okay. Let me ask you if I can, are  
5 you familiar with the term "traceable,  
6 verifiable, and complete" when referring to  
7 gas safety records?

8 A It's not a term that I'm familiar  
9 with in my experience in an underground  
10 storage. I have heard the term most recently  
11 used. My understanding of the term is that  
12 it has relation to above-ground transmission  
13 piping so that's -- and that's kind of the  
14 limit to my understanding.

15 Q Okay.

16 Mr. Zarchy, if we could turn to  
17 Exhibit SED-231, if you have that handy.  
18 Great. This is a document -- just give me a  
19 second. Yeah. This is a document from the  
20 Federal Register. If we go to "Background,"  
21 if you can look down under the background  
22 information there, yeah.

23 So, Mr. Neville, let me just ask  
24 you, have you ever seen this -- if you want  
25 to scan it, you can take a moment -- but have  
26 you ever seen this document before?

27 A I had a chance to scan it when it  
28 was supplied for the hearing here and that's

1 the only time I've seen it.

2 Q Okay. So if we turn to under the  
3 background piece several paragraphs down, and  
4 I'll just -- staying on the page, I  
5 believe -- can you scroll up one page, back  
6 up to the background section. Can you scroll  
7 up a little bit more if you could. So maybe  
8 you could turn the term "Background" at the  
9 top, so scroll to where the term "Background"  
10 is. Keep scrolling down. A little bit more.  
11 You see the term "Background"? If you could  
12 scroll to that term toward the top of the  
13 screen. "Background" is currently in the  
14 lower right-hand corner. There you go.  
15 Thank you.

16 If we turn to the top of the  
17 paragraph right under "Background," it says:  
18 On January 10, 2011, PHMSA issued  
19 Advisory Bulletin 11-01. This  
20 Advisory Bulletin reminded  
21 operators that if they are relying  
22 on the review of design,  
23 construction, inspection, testing,  
24 and other related data to  
25 establish MAOP and MOP, they must  
26 ensure that the records used are  
27 reliable, traceable, verifiable,  
28 and complete.

1 Do you see that?

2 A Yes.

3 Q Okay. Have you followed any of  
4 those terms to apply them to underground  
5 natural gas storage facility records?

6 A "Reliable, traceable, verifiable,  
7 and complete." The terminology there has in  
8 my experience not been applied to subsurface  
9 underground piping, underground storage.

10 Q Okay. Let's turn to your testimony  
11 page 21, lines 6 through 8 if we can. I  
12 think it's --

13 Mr. Zarchy, if you could go back  
14 to -- I believe it's the opening testimony.  
15 I'm sorry, I think it's the testimony that  
16 had his background again, and I apologize. I  
17 think it's -- it's page 21. It's either the  
18 opening or the reply.

19 MR. LOTTERMAN: I believe it's the  
20 reply, Mr. Gruen.

21 MR. GRUEN: Thank you. I appreciate  
22 that, Mr. Lotterman.

23 Q So let's go to the reply, which is  
24 Exhibit 15, SoCalGas 15.

25 ALJ HECHT: We'll be off the record  
26 just to find our place.

27 (Off the record.)

28 ALJ HECHT: We'll be back on the

1 record. We just found our place in this  
2 exhibit.

3 Please proceed, Mr. Gruen.

4 MR. GRUEN: Thank you, your Honor.

5 Q So page 21, lines 6 through 8 we  
6 have up on the screen. There you say:

7 I'm also a member of the Pipeline  
8 Research Council International  
9 underground storage community, a  
10 community of pipeline companies  
11 seeking to research and improve  
12 global energy pipeline systems.

13 Do you see that?

14 A Yes, I do. Yes.

15 Q Does Southern California Gas  
16 Company operate pipelines at Aliso Canyon  
17 natural gas storage facility?

18 A Yes.

19 Q And SoCalGas operates, to your  
20 knowledge, a system of transmission and  
21 distribution lines as well; is that right?

22 A Yes.

23 Q Okay. Let's go to the next  
24 exhibit, which is Exhibit SoCalGas-01. Let's  
25 go back to the opening testimony. While  
26 we're going there, just to clarify, I'd like  
27 to get some clarification on portions of your  
28 testimony that state, "There were no

1 confirmed leaks on Well SS-25 prior to  
2 October 23, 2015," just as kind of an  
3 overview, just tagging it.

4 With that in mind, if we could go  
5 to page with Bates Number 1.0002. Thank you.  
6 That's the Bates number there. If we go to  
7 lines 9 through 12, you state:

8 SoCalGas monitoring, inspection,  
9 and testing program successfully  
10 tested and monitored wells,  
11 identified well conditions, and  
12 addressed and repaired casing  
13 leaks. SoCalGas operated and  
14 maintained SS-25 consistent with  
15 these practices and procedures and  
16 there was no indication of a leak  
17 at SS-25 prior to October 23,  
18 2015.

19 Do you see that?

20 A Yes, I do.

21 Q Okay. Let me just ask -- and I  
22 understand you may have limited knowledge,  
23 but just to clarify -- after SoCalGas  
24 contracted with Boots & Coots to kill  
25 Well SS-25, did SoCalGas communicate with  
26 Boots & Coots that there was no indication of  
27 a leak at SS-25 prior to October 23, 2015?

28 A Yeah, I wouldn't know that. I

1 never did communicate with Boots & Coots.

2 Q Okay. Understood. Is it your  
3 testimony that there was no records -- just  
4 with clarification of the sentence we just  
5 read, moving on, is it your testimony that  
6 there was no record of any holes of any sort  
7 in the SS-25 2 7/8-inch tubing or the 7-inch  
8 production casing prior to October 23, 2015?

9 A I'll have to take that one at a  
10 time. The 2 7/8 tubing had -- I don't know  
11 if you'd call it a hole, but it was a  
12 crossover port right above the packer, which  
13 allowed for casing flow, so that is sort of a  
14 hole because it's a through point in the  
15 tubing. So the production casing, I would  
16 say that, yes, prior to October 23, 2015, the  
17 incident, there was not a hole in the  
18 production casing.

19 Q And so, therefore, because your  
20 testimony is no hole and so no indication --  
21 because there was no hole; therefore, no  
22 indication of a leak on production casing of  
23 SS-25 prior to October 23, 2015.

24 Do I have that correct?

25 A Well, there were anomalies.  
26 Certainly there were some anomalies in the  
27 history of the well. But upon review of  
28 those anomalies and the investigations that

1 were done at the time, the conclusions  
2 then -- and I believe today -- was that there  
3 was no hole in the production casing.

4 Q Okay. And just with regards to the  
5 subsurface safety valve crossover ports that  
6 you mentioned, I think you mentioned that  
7 those -- you described them as holes just  
8 so -- because it's a term that I'm not  
9 familiar with. I've seen SoCalGas provide it  
10 in the response, but just to clarify what  
11 that means, those -- are those holes in the  
12 tubing, the crossover ports? Would you agree  
13 to that terminology?

14 A Yeah, they could either be slots or  
15 perforated holes, circle holes or slots, but  
16 they provide a meth -- a way for the gas, you  
17 know, during withdrawal, to come up through a  
18 short section of tubing which landed in a  
19 packer, and then the gas flow goes through  
20 those slots or holes and into the casing so  
21 that the well can be flowed up the casing.

22 Q Okay. That's --

23 A It's an integral part of the  
24 downhole components of the tubing.

25 Q So the -- I'm still a step behind  
26 you, I think. So just the slots are another  
27 kind of hole. Would that be a fair  
28 characterization in your view?

1           A    Yeah.  And I'd say there were  
2   holes.  They could very well have been a  
3   slot.  I just -- I don't know, but there's  
4   some geometry in the bottom of the well just  
5   above the packer that allows for the flow to  
6   cross over from the tubing to the casing to  
7   provide --

8           Q    And -- okay.  And just with the  
9   term "crossover" because I'm not entirely  
10  clear, it means that through a hole or a  
11  slot, gas is able to escape from the tubing  
12  into the casing.

13                    Would that be an accurate way to  
14  state it?

15           A    Well, it's designed -- I don't know  
16  about escape.  Escape means it's a different  
17  thing to me, but I would say that it is --  
18  the holes or slots are designed to  
19  accommodate casing flow.

20           Q    Okay.

21           A    It provides a flow path for the  
22  gas.

23           Q    Maybe if we could -- I'm still --  
24  maybe if we could agree on this term:  The  
25  flow of gas could mean, or does mean, would  
26  you agree, the movement of gas from the  
27  casing to the tubing, would that -- through  
28  the slots or holes -- would you agree with

1 that characterization?

2 A Yes, but from the -- in the case of  
3 flow, it would be from the tubing to the  
4 casing.

5 Q Thank you. Okay. If I used the  
6 terms "slots" or "holes" in the tubing  
7 instead of "crossover ports," would you  
8 understand what I meant in using that  
9 terminology?

10 A Sure.

11 Q Okay. Thank you. So specifically,  
12 let me just, if I understand right, the  
13 crossover ports, those slots, are those slots  
14 related to the subsurface safety valve that  
15 was installed in the tubing?

16 A Yes, they are --

17 Q Are you familiar with that term?

18 A Yes.

19 Q I'm sorry, I think we talked over  
20 each other and I think that may have been my  
21 fault. The crossover ports or slots or holes  
22 are related to the subsurface safety valve;  
23 is that right?

24 A Yes, that's correct.

25 Q Thank you. And if SoCalGas had  
26 records of those subsurface safety valve  
27 slots or holes prior -- in the tubing prior  
28 to October 23, 2015, where were those records

1 kept?

2 A They would be in the well file and  
3 specifically the component of the well file  
4 called the Well History File. It would be a  
5 part of the workover record associated with  
6 the installation of the tubing with those  
7 components in it. So I would go to the final  
8 workover program -- or, I'm sorry, the final  
9 workover Well History Report.

10 Q Okay. And to your knowledge, were  
11 those records produced to Safety and  
12 Enforcement Division?

13 A To my knowledge, they were,  
14 although -- to my knowledge, they are. I  
15 don't -- it's -- you know, to be honest, it's  
16 hard for me to know -- I wasn't involved with  
17 the production from SoCalGas to SED, so I  
18 don't know if I would be the one to say they  
19 were provided. They would be in the well  
20 file, and to the extent the well file was  
21 provided, then those histories would be  
22 provided.

23 Q Okay. And since you're not  
24 familiar with the production of the documents  
25 that were provided to SED, who would you  
26 suggest could answer that question?

27 A Our data requests centered around  
28 Mr. Greg Healy and the legal team, so when we

1 would get a data request, it would come from  
2 him, his group, and we would provide them  
3 with -- in a general sense, you know, certain  
4 aspects of the data request. And then how  
5 that was then transmitted to SED is beyond  
6 what I would know.

7 Q Okay. Thank you. I want to just  
8 maybe clarify a piece of your testimony  
9 further under this line. So part of your  
10 testimony is that SoCalGas' monitoring,  
11 inspection, and testing program did not find  
12 any leaks on well SS-25 prior to October 23,  
13 2015.

14 Do I have that right? ]

15 A Yeah.

16 Q Okay. And are you familiar with  
17 temperature surveys?

18 A Yes.

19 Q And what are those?

20 A Oh. A temperature survey is a  
21 particular data collection that's done in a  
22 well. It involves the lowering of a  
23 temperature probe from the surface to the top  
24 of the storage zone -- actually, through the  
25 storage zone. The expectation is that the  
26 temperature response will correlate to a  
27 geothermal gradient. And the idea is that if  
28 there is a deviation from that gradient that

1 would be defined as an anomaly, and that  
2 anomaly would -- could be a potential leak.

3 Q Thank you. I think that's  
4 consistent with your opening testimony, if I  
5 remember. And just with regards to the  
6 thermal zones, your use of that term, how do  
7 you -- does SoCalGas typically go with the  
8 temperature surveys into a well?

9 A I'm sorry. How does SoCalGas go?

10 Q I'm sorry. How deep? When -- if I  
11 understood correctly, you had mentioned that  
12 the temperature survey goes through thermal  
13 zones. And I believe the thermal zones, as I  
14 understand it, are at a certain depth in a  
15 well. So this is regards to depth. How deep  
16 do the temperature surveys go when they are  
17 placed -- when they are used to examine the  
18 well or survey a well?

19 A So the temp surveys are run into  
20 the storage zone itself passed the top of the  
21 storage zone, below the caprock and into the  
22 storage zone and typically all the way to the  
23 bottom of the well, not always but typically.  
24 And when you say the word "thermal zones," in  
25 reality, there's a geothermal gradient which  
26 is just kind a linear increase in temperature  
27 from the surface to the bottom of the well.  
28 It's -- so there's not any particular, you

1 know, zone that's hotter than the other.

2 It's just that a normal gradient from surface  
3 to the bottom.

4 Q And if I'm understanding that  
5 correctly, it means that under typical  
6 circumstances, without anomalies, you would  
7 see -- as the survey moved deeper into the  
8 well, you would see a gradual increase in the  
9 showing of temperature?

10 Is that an accurate  
11 characterization?

12 A Yes. That's accurate. That's  
13 exactly what we see. However, when we get to  
14 the top of the storage zone itself, the  
15 storage zone is at a lower temperature than  
16 the geothermal gradient. It's actually been  
17 cooler -- cooled by the storage gas. So we  
18 see what's called a temperature break at the  
19 top of the storage zone.

20 Q Okay. Okay. And you know where  
21 the storage zones are -- where those  
22 temperature -- those gradient breaks are; is  
23 that right?

24 A Yes, we do.

25 Q Okay. Let's turn to noise logs, if  
26 we can. Are you familiar with noise logs?

27 A Yes.

28 Q And in a similar level of detail to

1 what you described -- you did to describe  
2 temperature surveys, could you describe noise  
3 logs? What are those?

4 A Sure. A noise log is also data  
5 collection within a wellbore usually from the  
6 top to the bottom. However, instead of a  
7 continuous grading -- continuous gradient,  
8 noise logs have to be stopped at different  
9 stations. And basically, every time the  
10 logging tool is stopped -- you know, we're  
11 basically at the microphone, and we're  
12 listening for anything that -- that we might  
13 hear.

14 Q Okay. And when you say  
15 "microphone," essentially, might give credit  
16 to Mr. Lotterman for this, but essentially,  
17 he used the analogy, if I recall correctly,  
18 of a microphone being slowly dropped down the  
19 well to hear noise that's picked up by the  
20 microphone. Would be an accurate  
21 characterization?

22 Apologies if I'm misstating  
23 Mr. Lotterman's terminology, but it was  
24 useful for purposes of understanding for me.

25 A Yeah, that's correct. It's a  
26 microphone that listens to four specific  
27 frequencies. I'm sorry. It's a microphone,  
28 yes, but the printout on the log is four

1 specific frequencies.

2 Q That are all picked up by the  
3 microphone?

4 A Right.

5 Q Okay. Can these surveys, the  
6 temperature surveys and noise logs together,  
7 identify potential leaks?

8 A They can. And that's what they are  
9 used for, to investigate anomalies and to  
10 confirm whether or not, in fact, there is a  
11 leak in the well.

12 Q And can these -- the temperature  
13 surveys and noise logs confirm leaks?

14 A We tend to -- by confirmation of a  
15 leak, it's confirmed to the point that now  
16 the next step is to bring in a workover rig.  
17 And a workover rig then can help confirm --  
18 you know, offer more data to even make a more  
19 positive confirmation. But to the extent I  
20 use the word "confirmed" with the noise  
21 intent log, they are confirmed enough to go  
22 to the next step, and that's to bring a  
23 workover rig in.

24 Q Okay. And so the workover rig,  
25 when you say it can offer more data to make  
26 an even more positive confirmation, does the  
27 workover rig provide confirmation? Can it  
28 provide -- excuse me. Let me restate the

1 question.

2 Can the workover rig provide  
3 positive confirmation of an actual leak in a  
4 well?

5 A Yes, it can.

6 Q Okay. And just so I'm clear, is it  
7 your testimony that none of the surveys or  
8 noise logs performed on SS-25 prior to  
9 October 23rd, 2015 identified potential leaks  
10 or possible leaks in Well SS-25?

11 A I think the earlier noise logs -- I  
12 recall in the 1980s there was some discussion  
13 about noise, and the noise that was  
14 associated with that particular noise log --  
15 you know, when I look back in the record at  
16 the noise logs, the noise did not occur above  
17 the top of the caprock. It was all within  
18 the storage zone itself. So I think when the  
19 words used, potential or probable -- I saw on  
20 noise logs where those words were used --  
21 the -- at the end of the day, the noise --  
22 all of the investigation, the noise logs, the  
23 temperature surveys and even a radioactive  
24 tracer survey, based on all of those logs and  
25 the fact that there was not noise above  
26 the top of the storage zone meant that there  
27 was not a leak -- and we're not really  
28 talking a casing leak. We're talking a shoe

1 leak, which is a leak through a microannulus  
2 in the cement around the storage zone. So  
3 it's -- there were notations, if possible,  
4 but at the end of the day, there was not  
5 noise above the storage zone to make a  
6 conclusion -- a confirmation that there was a  
7 leak.

8 Q Okay. I just want to be sure  
9 you're done with your answer. I don't want  
10 to interrupt. It's -- do you have anything  
11 else you want to add to that?

12 A No.

13 Q Okay. So there was a lot there. I  
14 want to unpack that a little bit, if I can.  
15 I think one of the things I understood -- and  
16 correct me -- is that the noise and  
17 temperature surveys, and you added tracer  
18 logs, did not show a leak at the shoe of the  
19 well.

20 Am I tracking that correctly?

21 A They showed a possible leak at the  
22 shoe. But there was a -- an -- I think one  
23 of the final noise logs that was run at that  
24 time frame showed that the noise did not go  
25 above the top of the caprock, and I could  
26 point out that Aliso Canyon storage zone is  
27 made up of multiple zones, and some of them  
28 may be a -- different permeabilities and

1 pressures. So we do see -- and we have seen  
2 crossflow between the various sands within  
3 the storage zone.

4 So to the extent that there was  
5 noise within the storage zone, I believe that  
6 those -- running those logs -- and I would  
7 come to the same conclusion -- believe that  
8 the noise that was heard was crossflow within  
9 the independent sand of the storage zone and  
10 not a shoe leak. A shoe leak we would expect  
11 to do -- hear the noise around the caprock  
12 and above the caprock, and that just wasn't  
13 the case here.

14 Q Okay. Let me ask a couple of other  
15 clarifications about what you said. As I  
16 understand it, when you use the term "storage  
17 zones," you're talking about areas along the  
18 well that are above the shoe; is that  
19 correct?

20 A In the case of -- I can't remember  
21 where they are in SS-25. But the storage --  
22 when we talk about the storage zone, it's  
23 somewhat complicated. There's an S1 sand,  
24 there's an S2 sand, an S4, an S6, an S8 and a  
25 few. They are all independent sands, and we  
26 call them "the storage zone." The -- we  
27 typically say, "The top of the storage zone  
28 is the top of the S4 sand." So I'm sorry.

1 Maybe I've lost track of the question.

2 Q I think it's helpful. Let me move  
3 on and keep going with the cross. I think I  
4 have enough to move on, and I appreciate your  
5 insight.

6 So I think -- let me see if I can  
7 just sum this up. I think your testimony  
8 is -- and correct me -- that none of  
9 SoCalGas' records showed leaks on Well SS-25,  
10 the casing, prior to October 23rd, 2015. In  
11 light of what you just testified, am I  
12 tracking that correctly?

13 A Yes, you are.

14 Q Okay. But as the SoCalGas records  
15 manager, your testimony is that there was a  
16 hole in the SS-25 tubing prior to October  
17 23rd, 2015.

18 Am I tracking that correctly as  
19 well?

20 A Only that I guess I wouldn't say  
21 that I'm, you know, the SoCalGas records  
22 manager, but there was this hole that we  
23 discussed earlier that provided for casing  
24 flow in the tubing as you say.

25 Q Okay. Thank you. That's helpful.  
26 Let me just ask. Let's say that there were  
27 records showing leaks on Well SS-25, for the  
28 sake of discussion, at the time of the

1 incident, where would SoCalGas keep those  
2 records?

3 A They would be in the temperature  
4 survey file, which is a -- one of the  
5 component files of what we call the well  
6 file. We have a survey file. The  
7 temperature survey file has chronological  
8 temperature surveys. So a leak, if it had  
9 existed, would have been noticed in the  
10 temperature survey file, and if that leak  
11 were actually -- you know, if it were a  
12 confirmed leak, there would be a record of a  
13 pressure -- of a workover done on that well  
14 in the well history file.

15 Q Okay.

16 A So that's where -- you used the two  
17 files together to asses the leak itself, and  
18 then the confirmation that -- you know, an  
19 actual leak was confirmed, and then the  
20 workover work done to deal with the --  
21 address the leak.

22 Q And when you say, "We use the two  
23 files together," is that the temperature  
24 survey file and the well history file or the  
25 well history file and the well file?

26 A The -- I would use the two -- I  
27 would use the well history file and the  
28 temperature survey file to look back for

1 leaks in a well -- confirmed leaks. Both  
2 files.

3 Q Okay.

4 A The well file is the -- is the kind  
5 of -- is the term used that covers the  
6 subcomponent files called the -- the well  
7 history file is a -- it's just one of four  
8 files in what we call the well file.

9 Q And just keeping that  
10 organizational structure you described in  
11 mind, if I understood right, the temperature  
12 survey file is a subcomponent then of the  
13 well history file?

14 Am I tracking that correctly as  
15 well?

16 A Well, the temperature survey file  
17 is a subcomponent of the well file. The well  
18 file is the general -- is the file which  
19 consists of four subs.

20 Q That's helpful. Thank you.

21 A Yeah.

22 Q Yeah. Let's go to Exhibit SoCalGas  
23 15, your reply testimony. And if we go to  
24 the page with the Bates-stamp SoCalGas  
25 15.0005. Thank you. And starting at line  
26 13 -- maybe 13 toward the top. That's great.  
27 Yeah. Thank you. You say:

28 SoCalGas utilized PI Historian,

1 (or PI), for collecting and  
2 maintaining operational data for  
3 the entire Aliso Canyon facility  
4 including for the individual  
5 storage wells. It served as a  
6 source for personnel to access  
7 operating data at the facility  
8 including on-off times in storage  
9 wells, gathering line flowing  
10 pressures, weekly pressure  
11 readings on storage wells, daily  
12 reservoir pressure, gas inventory,  
13 expected flow by well choke type  
14 and size. PI provided users the  
15 opportunity to track or trend  
16 operating data over time. For  
17 example, weekly pressure of wells  
18 could be compared and plotted over  
19 time with PI. This made it a  
20 superior repository for  
21 operational information and data,  
22 parenthesis -- you have it in  
23 parentheses -- (versus including  
24 the data in the hardcopy well  
25 file).

26 Do you see that?

27 A Yes.

28 Q Okay. So during the incident, if

1 there were records showing leaks on Well  
2 SS-25, would they be found in PI Historian?

3 A No, they would not. They would be  
4 in the well file.

5 Q Hardcopy?

6 A They would be in the hardcopy well  
7 file. I will point out that we were  
8 transitioning to a software system called  
9 Wellview which contained more recent  
10 workovers, but the temperature surveys were  
11 all in the hardcopy well file. So the short  
12 answer to your question is yes. One would go  
13 to the hardcopy well file and not to PI for  
14 evidence of leaks.

15 Q Thank you. Okay. Let -- if I can,  
16 turning to a slightly different line, I'd  
17 like to ask you some questions about the  
18 purpose of the packer in Well SS-25, if you  
19 have that in mind.

20 A Yes.

21 Q So let's go to the opening  
22 testimony with that introduction, which is  
23 SoCalGas Exhibit 1, and you're a step ahead  
24 of, Mr. Zarchy. I appreciate it. The Bates  
25 No. 1.0004 at the bottom. And if we scroll  
26 back to line 5, you say there that the flow  
27 path per casing was from the storage zone  
28 perforations. You have in parentheses, (8510

1 feet to 8748 feet) close paren, into the 7"  
2 casing below the production packer into the  
3 tubing at 8496 feet through a crossover port  
4 at approximately 8451 feet into the 2-7/8"  
5 by 7 -- X 7" annulus into the wellhead at --  
6 at the surface."

7 And I'll stop there and just ask if  
8 you -- if I've read that correctly, and  
9 please correct me if I've misstated it.

10 A No, that's correct.

11 Q Okay. And let's turn to the  
12 previous page of your testimony, Bates  
13 No. 1.003, and look at that diagram that you  
14 have there, the subsurface diagram of Well  
15 SS-25, and that shows the tubing running  
16 through the production packer toward the  
17 middle of the diagram. Is that -- is that  
18 correct?

19 A Yes.

20 Q Okay. So the packer you've  
21 referred to, if we can describe it on the  
22 set -- on that diagram -- and maybe -- I  
23 don't know if it's possible to show the  
24 cursor there, but if it is -- it's the set of  
25 rectangles with those Xs through them that  
26 span across the casing of the well.

27 And maybe, Mr. Zarchy, could we  
28 zoom in slightly. Okay. Thank you.

1                   Do you see the set of rectangles  
2 with the Xs through them that span across the  
3 casing of the well?

4                   A    Yes, I do.

5                   Q    Would that be accurate to call that  
6 the packer?

7                   A    That is the packer.

8                   Q    Okay.  And does the -- and there --  
9 the packer that -- the -- I don't know how to  
10 better describe it than maybe a knife.  It  
11 looks like there's -- the packer is running  
12 through another set of lines there in the  
13 middle of the well.  Is that the tubing?

14                  A    Right.  The lines that go all the  
15 way to the top, those two parallel lines,  
16 yes, that is the --

17                  Q    Right.  Okay.  And just to clarify,  
18 is the packer actually -- I recognize the  
19 packer here is shown as going through the  
20 tubing, but in the well itself, is the packer  
21 crossing through the tubing?

22                  A    There is -- typically there is a  
23 short section of tubing that goes through the  
24 packer, and it -- it does depend on the type  
25 of packer used, but there is a small -- in  
26 any packer situation, there's a small amount  
27 of tubing or pipe that goes below the packer.  
28 It's a very --

1           Q     Understood.  Sorry for the  
2     interruption.  So that is to say that the  
3     tubing goes through the packer but the packer  
4     doesn't go through the tubing; is that  
5     correct?

6           A     Correct.

7           Q     Okay.  What was the purpose of  
8     having a packer in Well SS-25?

9           A     Well, a packer provides a -- a  
10    place for the tubing to be landed, and it  
11    provides a -- the combination of which will  
12    offer a point to do various functions within  
13    a well.  It allows you to circulate fluid in  
14    a well.  It -- it allows for a downhole  
15    mechanical isolation in the well, you know,  
16    and more specifically, I guess, when you have  
17    the packer and -- when you have the tubing  
18    landed in the packer, there's a profile  
19    that's denoted by those solid triangles in  
20    the packer itself or above the packer.  That  
21    provides a place for a mechanical plug.  So  
22    it offers the -- it offers SoCal the ability  
23    to isolate the tubing in the casing downhole  
24    by just simply running a mechanical plug.

25          Q     Let me -- I appreciate that answer  
26    and the technical nature of it.  Let me see  
27    if I can unpack that.  With my lay  
28    understanding, I'll try.

1           So does part of the packer -- part  
2 of the purpose of the packer then is to  
3 enable the tubing to run down through the  
4 well and into the reservoir or near the  
5 reservoir?

6           A     Well, one could run tubing in a  
7 well without a packer. So that isn't its  
8 primary purpose because it can -- tubing can  
9 be run in into well without a packer. It  
10 would just be hanging there. But when a  
11 packer is run and the tubing is stabbed into  
12 the packer, now you have a way of isolating  
13 the wellbore which includes tubing and casing  
14 from the storage zone pressure. So if you  
15 didn't run a packer, you wouldn't have that  
16 ability.

17           Q     Okay. So the casing is separated  
18 by the packer from the reservoir; is that  
19 correct?

20           A     Yeah. That's correct. Yeah,  
21 that -- the packer offers that -- the seal  
22 between the annulus -- the tubing annulus and  
23 the casing. It provides the seal there.

24           Q     Okay. And -- but it allows gas to  
25 run -- run the tubing -- because the tubing  
26 runs through the packer, gas can get from the  
27 surface to the reservoir through the packer  
28 and back from the reservoir to the surface as

1 well, is that right, through the tubing?

2 A Yes, exactly. Yes, through the  
3 tubing.

4 Q Okay. Okay. Yeah. So just -- I  
5 think that you said -- and you did mention  
6 those triangles just above the packer that  
7 are shown on the tubing in the diagram. Am  
8 I -- you see those as well?

9 A Yes.

10 Q Okay. And so those triangles, what  
11 do those -- what are those, and what do they  
12 do?

13 A Those are called profiles, and they  
14 are -- what they are is a restriction in the  
15 internal diameter of the tubing. It's like a  
16 shoulder. And so the bottom one is a  
17 shoulder that allows a mechanical plug to be  
18 set in it. So if you can envision running a  
19 mechanical plug on wire, it would go through  
20 the top shoulder, and then it would set into  
21 the bottom one. And that's what would plug  
22 the storage reservoir in combination with the  
23 packer -- it would plug it or isolate it.

24 Q Okay. Thank you. Let's go back to  
25 the crossover ports.

26 ALJ HECHT: This is Judge Hecht. I  
27 just want to get a sense of whether there's  
28 going to be a reasonable breaking point at

1 some point in the next 15, 20 minutes?

2 MR. GRUEN: Yes, your Honor. I think I  
3 can probably finish up this line of cross  
4 sooner than that, and I'll flag it for your  
5 Honor. Thank you.

6 ALJ HECHT: Okay. Thank you. At that  
7 point, I think we will take our lunch break.

8 MR. GRUEN: Understood. Thank you,  
9 your Honor.

10 Q So with regards to the crossover  
11 ports, you recall your testimony talking  
12 about there being crossover ports filled the  
13 casing annulus with gas? Do I have that  
14 correct? ]

15 A Yes.

16 Q Okay. Is there any document prior  
17 to October 23rd, 2015 that identifies  
18 crossover ports in well SS-25?

19 A I would go to the -- to the diagram  
20 that was drawn after the last workover in the  
21 well, which was 1979. There's a wellbore  
22 schematic, and there's also -- associated  
23 with that wellbore schematic, there's a --  
24 what we have called a tubing detail. So the  
25 two together would show those crossover  
26 ports. I --

27 Q And --

28 A And this one --

1 Q Sorry.

2 A This particular schematic doesn't  
3 show the crossover ports.

4 Q Okay. And I -- I think when I use  
5 the term, crossover port, sir, I appreciate  
6 that.

7 Do those documents that you're  
8 referring to actually use the term, crossover  
9 ports?

10 A I'd have to look back at the -- at  
11 the wellbore diagram. It's all part of  
12 the -- the subsurface safety valve system,  
13 the annular flow system. I -- I would have  
14 to look at the tubing diagram to see how  
15 they're referred.

16 Q Okay. Let me ask you this: Could  
17 the crossover ports that you talk about in  
18 testimony be closed?

19 A Not in this well.

20 Q So if you've got a packer that's  
21 separating the casing from the reservoir, as  
22 we -- as we discussed earlier, wouldn't  
23 crossover ports that are always open defeat  
24 the purpose of the packer?

25 A No. They -- the -- the purpose of  
26 the packer is -- well, so the -- there's  
27 different purposes. The crossover ports  
28 allow flow. We -- we want it to flow up the

1 tubing and cross over up the -- to up the  
2 casing. The only reason the packer's in  
3 there is -- is for these -- the time when you  
4 want to make an isolation downhole, you want  
5 to shut the -- the well off downhole from the  
6 service, from the -- the tubing and the  
7 casing. So that's when the packer comes into  
8 play.

9 Q Okay.

10 Your Honor, I think we could end  
11 our line of cross here, if you'd like to  
12 adjourn for lunch.

13 ALJ HECHT: I think that this is  
14 probably a good time to do that, to take an  
15 hour for lunch.

16 Are there any questions or  
17 housekeeping issues anybody would like to  
18 raise before we do that?

19 (No response.)

20 ALJ HECHT: Okay. Seeing none, I will  
21 say that we're going to take a one hour lunch  
22 break. We will resume at one o'clock, and I  
23 will see you all back then.

24 We'll be off the record.

25 (Whereupon, at the hour of 11:59  
26 a.m., a recess was taken until 1:00  
p.m.)

27 \* \* \* \* \*

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AFTERNOON SESSION - 1:00 P.M.

\* \* \* \* \*

DAN NEVILLE,

resumed the stand and testified further as follows:

ALJ POIRIER: We'll be back on the record.

This is ALJ Poirier. We're returning from our lunch break in the I.19-06-016 evidentiary hearings. Before we went on lunch break, SED was cross-examining Mr. Neville with SoCalGas, and we're going to continue with that.

So please go ahead, Mr. Gruen.

MR. GRUEN: Thank you, your Honor.

CROSS-EXAMINATION RESUMED

BY MR. GRUEN:

Q Mr. Neville, I just wanted to circle back on one point you clarified in this morning's cross-examination.

I had understood you to say that you are not the records manager for SoCalGas. Did I understand that correctly?

A Yes.

Q Who is the records manager for SoCalGas?

A Are you talking about today or

1 prior to the event?

2 Q Let's say during the event. Who  
3 was the records manager at that point?

4 A Prior to the event?

5 Q During the event, sir.

6 A Well, I would say -- yeah, during  
7 the event, as far as the well -- the hard  
8 copy well files, the -- the way the records  
9 were managed were the individual that created  
10 the record would -- would be responsible for  
11 filing it. So at -- at the time we -- we  
12 didn't have a person that was a records  
13 manager that was, you know -- that had  
14 custody and control of the well files. It  
15 was -- it was a matter of who generated the  
16 document, and it would be up to them to file  
17 it in the appropriate file.

18 Q I see. Okay. Let me ask you --  
19 I'm going to turn to some questions to  
20 clarify whether SoCalGas did not confirm or  
21 repair casing leaks on well SS-25 prior to  
22 October 23rd, 2015.

23 So just as a -- as a precursor, and  
24 without introduction, if we stay with your  
25 opening testimony, that is Exhibit  
26 SoCalGas-01, and if we could bring that up on  
27 the screen share, and go to the -- the Bates  
28 stamp 1.0007, and toward the bottom of the

1 page, could -- so there, starting at line 28,  
2 you say, "Prior to October 23rd, 2015,  
3 SoCalGas successfully addressed and repaired  
4 infrequent casing leaks as they arose." Do  
5 you see that?

6 A Yes.

7 Q So in that sentence, how do you  
8 define casing leaks?

9 A So a casing leak could be a -- a --  
10 a movement of gas outside of the casing. It  
11 could be due to a casing component, such as a  
12 stage collar or a patch over the stage  
13 collar. It could be due to the casing body  
14 itself, or the threads of the casing. It  
15 could even be considered a shoe leak,  
16 however, that may be a -- a -- a stretch.  
17 But, it's -- a shoe leak is -- is not a leak  
18 through the casing. It's a leak on the  
19 outside through the cement. But, those were  
20 all leaks that were addressed and -- as  
21 they -- and repaired as they arose.

22 Q Okay. And just -- I think you had  
23 started the -- the answer with leaks outside  
24 of the casing, and then clarified.

25 But, just to be sure I'm  
26 understanding your answer, would casing leaks  
27 include leaks that go from inside the casing  
28 through the casing to the outside of the

1 casing?

2 A Yes, through -- through the casing  
3 body itself or through a stage collar, or --  
4 or even a patch that had been placed over the  
5 stage collar. That --

6 Q Thank you. Oh, go ahead. I'm  
7 sorry?

8 A Yeah. All those would be addressed  
9 and repaired as they arose.

10 Q Okay. Let's, if we could, just  
11 turn to Exhibit SoCalGas-15, the reply --  
12 your reply testimony. Then, if we go to  
13 Bates stamp with the page -- excuse me, page  
14 with Bates stamp 15.0014, as shown there, and  
15 then scroll back up slightly on that page to  
16 lines 6 through 8, excuse me, it says there:  
17 "SED states further that since there was no  
18 mention of repair in the well file,  
19 presumably the leak existed at the time of  
20 the incident. This statement ignores the  
21 fact that annual temperature surveys as well  
22 as noise logs run do not suggest there was a  
23 leak in SS-25." Do you see that?

24 A I'm sorry. I can't -- is it  
25 lines 15 through 17?

26 Q No. I'm sorry. I may have  
27 misspoken, and if I did, I apologize. No.  
28 It's lines 6 through 8.

1           A    Okay.

2           Q    And just to -- do you want me to  
3 restate the -- why don't you have a -- a look  
4 at it?

5           A    Yeah, that's okay. You don't need  
6 to -- yeah, you don't need to restate it. I  
7 can read it here.

8           Q    Yeah.

9           A    Okay. I've read it.

10          Q    And so you testified earlier that  
11 there was never a leak on well SS-25's casing  
12 before the incident. Correct?

13          A    Correct.

14          Q    Okay. So regarding the position,  
15 SoCalGas position that there were no  
16 indications of leaks prior to October 23rd,  
17 2015 -- actually, let me just ask.

18                Regarding that position, I want to  
19 just be sure, SoCalGas did not -- or you  
20 don't know that -- if SoCalGas communicated  
21 that to Boots & Coots at any point during  
22 Boots & Coots' kill -- kill attempts. Is  
23 that correct?

24          A    Right. That's something I wouldn't  
25 know. I didn't communicate with Boots &  
26 Coots.

27          Q    Okay. Do you know who would be  
28 able to answer that question of the

1 witnesses?

2 A Most likely, Mr. Schwecke, who's  
3 going to be testifying on -- on the -- the  
4 well kill. My testimony is -- is the time  
5 prior to the incident.

6 Q Okay. Let me ask about -- okay.

7 And so I believe we -- we  
8 established, too, that there were no  
9 indications of possible or probable leaks on  
10 SS-25 prior to the incident. Did I  
11 understand that right --

12 A Correct.

13 Q -- before lunch? Okay.

14 So if there was an indication of a  
15 possible and probable leak on well SS-25  
16 before the incident, if there had been,  
17 SoCalGas did nothing to check whether the  
18 possible leak was an actual one or not. Is  
19 that correct?

20 A At -- during the initial part of  
21 the well kill? That's when you're asking?

22 Q I'm asking through the history of  
23 the well.

24 A Well, through the history of the  
25 well prior to 2015, well, we -- we checked  
26 annually through the running of a temperature  
27 survey.

28 Q And found, through the temperature

1 surveys, your testimony is, that there was no  
2 actual leak?

3 A Right.

4 Q But, if there was a possible or  
5 probable leak that had been shown, given your  
6 testimony that there was no actual leak, if  
7 there was an indication of a possible or  
8 probable leak on well SS-25 before the  
9 incident, did SoCalGas check to see whether  
10 the possible or probable leak was an actual  
11 leak or not?

12 A The -- the -- the -- what's done in  
13 that -- in the case of -- of determining  
14 whether or not there is a leak is done with  
15 temperature and noise logs. And so that's  
16 the investigation. If -- if the company  
17 believes there is a leak, if there is a  
18 confirmed leak through those investigations,  
19 the next step is to put a workover rig on the  
20 well.

21 Q I -- I don't think we're talking  
22 past each other too much. Let me restate it  
23 a little bit, and see if we can connect on  
24 this one.

25 How -- let's say that there's a  
26 possible or a probable leak, not a determined  
27 leak, but say that it's possible or probable.  
28 How does SoCalGas determine in that instance

1 whether the possible or probable leak, if  
2 it's discovered, is, in fact, an actual leak?

3 A So hopefully, I'll answer this  
4 correctly, or -- but, the -- I think if -- if  
5 the leak is during the investigation, if it's  
6 still considered possible or probable, then  
7 the company would -- would go to their next  
8 step of -- of putting a workover rig on -- on  
9 the well, because -- because that is the next  
10 step. There's really nothing to do in  
11 between. It's either a "no" or a "no-go"  
12 situation. If it's -- if it's confirmed not  
13 to be a leak, then there's no workover. If  
14 it's still a possibility that there's a leak,  
15 you know, the -- the investigation would  
16 continue until someone could either confirm  
17 that it isn't or it is. If it's borderline  
18 possible, then the company could consider to  
19 put a workover rig on a well, if -- if,  
20 through investigation, it can't be confirmed  
21 that it's not a leak.

22 Q Thank you. I think I better  
23 understand the nature of your answer before,  
24 as well. Thank you for that.

25 When was the last time SoCalGas  
26 killed well SS-25 prior to October 23rd,  
27 2015?

28 A Let's see. I -- I know it was

1 killed during the 1979 workover. I'm trying  
2 to recall any work that would have required  
3 the well to be killed. The only work that  
4 would require the well to be killed is --  
5 would be is if the well had -- valving itself  
6 were replaced, and I -- I don't know that to  
7 be the case. So I guess my answer is I do  
8 know that it was killed in 1979, but I'm not  
9 aware of it being killed since.

10 Q Okay. And what was the purpose of  
11 the 1979 well kill?

12 A So that -- the 1979 well kill was  
13 done so that the work of 1979 could be  
14 carried out. As you know, to put a workover  
15 rig on a well, and to do work on it, one has  
16 to kill the well, and kill the well with  
17 workover fluid. So the work being done at  
18 the time was -- in 1979 was a replacement of  
19 the subsurface safety valve system.

20 Q Thank you. Understood. Okay.  
21 Let's go back to exhibit -- I think we're on  
22 the other one. Let's go back to SoCalGas-01,  
23 Exhibit SoCalGas-01, your opening testimony,  
24 if we could, and with the page with Bates  
25 number 1.0006, starting at line 20, just  
26 scroll ever so slightly, if we could. Great.  
27 Thank you.

28 And subheading "E" there on the

1 screen says -- in that subheading you  
2 describe how annual temperature surveys and  
3 investigative noise and tracer surveys work.  
4 Correct?

5 A Yes.

6 Q Now, you talked about temperature  
7 and noise surveys a little bit this morning,  
8 but I want to get into a bit more detail  
9 about how we might identify what we're seeing  
10 as a result of the survey.

11 So let's look at line 21, and  
12 I'll -- I'll just read there quickly. "Once  
13 per year, and sometimes more frequently,  
14 SoCalGas performed a temperature survey by  
15 lowering a specialized thermometer probe down  
16 the full length of each UGS well,  
17 continuously recording temperature down to  
18 the depth of the reservoir. Temperature  
19 surveys can identify leaks, because gas  
20 moving through a small opening creates a  
21 pronounced localized temperature dot -- drop  
22 by virtue of a natural phenomenon known as  
23 the Joule-Thomson effect. A temperature  
24 survey is recorded on a graph consisting of a  
25 plot of temperature on the "X" axis, and  
26 depth on the "Y" axis. The temperature  
27 survey for a typical well having pressure  
28 containment, i.e., no leaks, will be a

1 relatively straight diagonal line  
2 representing a gradual increase in  
3 temperature as the probe is lowered into the  
4 earth. The increase -- the increase is  
5 caused," excuse me, "by geothermal heat. By  
6 contrast, the temperature survey for a well  
7 with a leak from the casing, a casing  
8 component, or the casing cement shoe, will  
9 show a gradient shift toward the left, i.e.,  
10 cold side of the graph, at the point of the  
11 leak."

12 So do you see that?

13 A Yes. My --

14 Q Just --

15 A -- page doesn't scroll to the next  
16 page. But, yeah.

17 Q Pardon me.

18 A Yeah.

19 Q Would you like to see the next  
20 page, for us to scroll down, to -- to see all  
21 of it?

22 A There. Thank you.

23 Q Appreciate the -- the correction.  
24 Thank you. So just a couple of clarification  
25 questions about the -- this paragraph.

26 Where you mention UGS in there,  
27 that stands for -- stands for underground  
28 storage. Is that correct?

1           A    Would you mind scrolling up, to --  
2   to make sure?

3           Q    On line 22?

4           A    Yes, underground gas storage well.  
5   Yes.

6           Q    Thank you.  And to help us  
7   understand more generally what you're talking  
8   about in this passage, if we looked at a  
9   temperature graph that did not indicate a  
10   leak or other anomaly, it would show a  
11   straight diagonal line on it.  Is that right?

12          A    Ideally, yes.  There -- the  
13   temperature surveys can be influenced by  
14   other factors; one, the storage zone is cool,  
15   and then there's -- there's a transition  
16   phase that occurs at the surface.  So  
17   ideally, it would be a vertical line, but  
18   it's -- in practice, there's -- there's some  
19   deviation at the top of the well and at the  
20   bottom of the well, and in fact, some surveys  
21   aren't perfectly diagonal.

22          Q    Okay.  Understood.  Thank you.  
23   With that clarification, let's say that there  
24   was a leak in a well, and just a  
25   clarification about how the temperature  
26   survey would show that.

27                    So if there was a leak in the well,  
28   the temperature survey gradient would shift

1 toward the left, or colder side of the graph,  
2 at the point of the leak. Is that correct?

3 A Yes. What would happen, actually,  
4 would be if, say, there was a casing leak,  
5 there would be a shift, like a pinpoint shift  
6 at the point of the leak, and then the line  
7 would return to normal gradient. So --

8 Q Thank you.

9 A Yes.

10 Q Go ahead. I'm sorry; sorry to  
11 interrupt.

12 A For example -- for example, a stage  
13 collar is a pinpoint location in the casing  
14 that has been known to cause a leak, and so  
15 what we see is a -- a straight line gradient,  
16 we see a pinpoint cooling shift, and then a  
17 return back to the normal gradient.

18 Q Okay. And would you indulge --  
19 would you agree -- maybe we just -- because  
20 I'm looking for lay terms to better  
21 understand this.

22 But, if we talk about the -- the  
23 gradient shift toward the left, and then the  
24 return shift to the right as it returns to  
25 the grade -- as it returns to the diagonal  
26 line, would it be -- would you agree that  
27 that's shown as a zigzag, if you will, on the  
28 graph? Would you indulge that term and

1 understand what I meant by that?

2 A Sure. Zigzag is -- yeah, zigs to  
3 the left, and then zags back to the right.

4 Q Yes. Thank you.

5 A Yes.

6 Q Okay. Okay. And the coolest point  
7 on the zigzag on the temperature survey in  
8 that instance would show the approximate  
9 depth of the leak. Is that right?

10 A That's right. That's correct.

11 Q Okay. And I think we were -- we  
12 were close to there.

13 But, if the rest of the well  
14 experienced none of the other leaks  
15 anomalies, cooling zones, tops or bottoms, if  
16 we were talking about the -- maybe -- if  
17 you'll indulge the term, maybe a normal type  
18 of situation, we'd expect the temperature  
19 survey line to return to straight and -- and  
20 diagonal at depths below the leak. Would you  
21 agree?

22 A Yes, that's what we would expect.

23 Q Okay. Thank you. Let's go to  
24 line -- page 1.0007, starting at line 3. And  
25 that's -- we're showing the 1.0007 Bates  
26 number, and then line 3. You say, "In the  
27 event a temperature survey identified an  
28 anomaly indicative of a possible leak,

1 SoCalGas conducted additional surveys such as  
2 noise or tracer surveys to further  
3 investigate the anomaly."

4 Do you see that?

5 A Yes.

6 Q Okay. So this is -- same process,  
7 because I didn't notice in your testimony a  
8 description of how the noise or temperature  
9 surveys show, if you will. So the -- these  
10 questions are going to go to that.

11 Let's say, first of all, that we  
12 see the zigzag on the temperature survey that  
13 suggests an anomaly, and means a possible  
14 leak. If you see that temperature survey on  
15 a well, first of all, in that instance, isn't  
16 it time to follow up with a noise survey or a  
17 tracer survey to see if you actually have a  
18 leak?

19 A Yes, typically that would be the  
20 case. The next step --

21 Q Okay.

22 A -- would be to run a -- a noise  
23 log.

24 Q Okay. And earlier, we were talking  
25 about the noise surveys and detecting the  
26 sound frequencies at various depths from the  
27 surface of the reservoir. Do you recall  
28 talking about that?

1           A    Yes.

2           Q    Okay.  So just to unpack that a  
3 bit, the noise log, then, that you're talking  
4 about would be another -- that's another  
5 graph.  Is that correct?

6           A    It is a graph, yes.

7           Q    Okay.  And the further you look  
8 down the graph, the deeper the microphone is  
9 going down the well.  Is that also correct?

10          A    Yes, that's correct.

11          Q    Okay.  And the noise survey, you  
12 talked about the four frequencies earlier  
13 this morning.  Do you recall that?

14          A    Yes.

15          Q    So that's -- that -- those four  
16 frequencies are represented by four lines on  
17 the graph?

18          A    Yes.

19          Q    Okay.  And let's say that the  
20 microphone from the noise survey picked up  
21 the sound of gas moving through an opening in  
22 the casing or around the base of the casing.  
23 What would you expect to see on the noise log  
24 to show that gas movement?

25          A    So in the case of a -- of a leak  
26 that would be, you know, in the casing body  
27 or a stage collar leak in a -- this is not a  
28 shoe leak.  That's a different type of a

1 leak. But, a noise log would -- would show  
2 a -- if peak frequency responds -- or peak  
3 amplitude, I guess is the word, or level,  
4 peak level of noise at the same point of the  
5 temperature surveys. So all four --  
6 typically, all four frequencies increase in  
7 value and match the temperature anomaly  
8 cooling effect. So they -- they pretty much  
9 overlay.

10 Q Yeah. Go ahead. I'm sorry.

11 A Yeah. And that's -- that's --  
12 that's a -- a good confirmation that there is  
13 an actual leak, because you've got both the  
14 temperature and the noise.

15 Q Understood. And just so -- in my  
16 lay understanding, if I was looking at a -- a  
17 noise log, and the noise log was showing that  
18 the sound of gas had been picked up, would it  
19 show crooked lines in those -- those four  
20 lines showing frequencies, would they start  
21 to get crooked? ]

22 A Yeah, the reason they get crooked  
23 is because with the noise log, one has to  
24 stop at depth. They have to stop and listen.  
25 So typically a temperature survey is run and  
26 then a noise log is run after -- and there's  
27 a specification, say, to stop every five feet  
28 across the temperature anomaly, so you really

1 get data points every five feet. And the  
2 reason it's crooked is because the log just  
3 connects those data points.

4 Q Okay. Whereas, if the microphone  
5 in the noise survey did not detect gas  
6 moving, you would see straight lines; is that  
7 right?

8 A Right.

9 Q Okay. Let's talk about the tracer  
10 survey that you discuss here on lines 8  
11 through 14. That's another tool that detects  
12 possible leaks in a well; is that right?

13 A Yes, it is. Typically from what  
14 I've seen looking through the history, it was  
15 used for helping diagnose shoe leaks. I  
16 haven't seen a case where it was used other  
17 than to help diagnose -- (inaudible).

18 (Coughing interruption.)

19 BY MR. GRUEN:

20 Q And when you talk about diagnosing  
21 shoe leaks, are those leaks that are just  
22 above the shoe of the well?

23 A Those would be leaks through the  
24 cement above the shoe of the casing, yes.

25 Q Just to maybe tie a term together,  
26 is the shoe of the casing at the same point  
27 as where the packer is?

28 A No. Typically the shoe of the

1 casing is going to be below the packer.

2 Q Okay. So then an RA tracer survey  
3 is used to detect leaks below the packer?

4 A Yeah, by the fact that the packer  
5 is above the shoe, that's a correct  
6 statement. But it's really used to detect  
7 movement of gas at the casing shoe through  
8 the cement that's on the outside of the  
9 casing shoe.

10 Q Okay. Thank you. I just wanted to  
11 be sure you were done. Let's say that a  
12 tracer survey indicated a casing shoe cement  
13 leak. What record would show that?

14 A If a tracer indicated a possible  
15 shoe leak, the notations would be on the  
16 tracer survey itself.

17 Q And what would those notations say  
18 if the RA tracer survey showed a leak?

19 A Well, it would be on the -- the way  
20 I've seen them on the front page of the  
21 tracer survey there would be a place for  
22 comments or results, and so --

23 Q Okay.

24 A -- there would be some description  
25 on the front page of the survey.

26 Q Okay. And doesn't the RA tracer  
27 survey -- I believe your testimony was  
28 talking about gas ascending on the outside of

1 the production casing, that the RA tracer  
2 survey can detect that.

3 Did I understand that correctly?

4 A Yes. I will say that it is --  
5 it's -- those particular surveys are  
6 challenging to run, so it requires -- if you  
7 want, I can cover how this works.

8 Q At a high level, if you want to --  
9 there's quite a bit more to cover.

10 A Okay.

11 Q I think, you know, Mr. Neville, I  
12 think we've got enough, maybe just one or two  
13 quick questions on this and I think we can  
14 move forward. Thank you. Let me just ask  
15 you just in terms of the tracer survey, can  
16 the tracer survey indicate -- let's say that  
17 gas is escaping from the shoe, that there's a  
18 shoe leak, it shows that there's a shoe leak.  
19 Can the tracer survey indicate how far up the  
20 outside of the production casing gas is  
21 moving?

22 A It can indicate that, yes, because  
23 it's basically -- the tracer element is  
24 followed in realtime during the log as it  
25 moves -- as the gas, you know -- if there was  
26 a shoe leak, the gas would be moving up, and  
27 so there's a sensor that watches the upward  
28 movement of this radioactive tracer. To the

1 extent that it can still trace it, you know,  
2 the gas is still moving up. When it stops  
3 seeing it, then, you know, it's moved away  
4 from the casing.

5 Q Thank you. What are the kinds of  
6 factors that would determine how quickly or  
7 slowly gas moves outside the production  
8 casing?

9 A The biggest factor is the  
10 volume of -- or the size of microannulus  
11 channel. We're really talking about pretty  
12 small channels, microannuluses in the cement,  
13 how it bonds to the casing, cracks in the  
14 cement, but it's typically a small amount of  
15 movement. That's --

16 Q Okay.

17 A -- one reason that it's difficult  
18 to confirm.

19 Q Okay. Thank you. Let me ask you  
20 just some -- going back to the temperature  
21 survey, with that -- those descriptions --  
22 and thank you for helping us -- helping me  
23 understand the -- what the different surveys  
24 show.

25 Let's say we had a temperature  
26 survey now on a well that showed an anomaly,  
27 if you indulge the term "zigzag" -- and I  
28 appreciate it -- without knowing anything

1 more about the well and what was causing the  
2 anomaly, in that instance, could you rule out  
3 the possibility of a leak in that well?

4 A If it had a zigzag, I wouldn't want  
5 to rule it out right then and there. I would  
6 want to attribute it to -- I would want to  
7 attribute it to something.

8 Q Okay. I think we clarified before  
9 you could rule out the possibility of a leak  
10 in the well. If the temp survey showed a  
11 zigzag, you'd want to do -- or need to do  
12 noise survey.

13 That's protocol; right?

14 A Typically it is, yeah.

15 Q Okay. And let's say that the noise  
16 survey detected gas movement in the well,  
17 that we have the crooked lines. In that  
18 instance -- excuse me, and that the crooked  
19 lines have that overlay with the anomaly that  
20 was shown, the zigzag that was shown on the  
21 temperature survey. In that instance, could  
22 you rule out a leak in the well in that  
23 instance?

24 A You know, depending on where in the  
25 well this occurred, if the noise log were --  
26 did you say the noise log were -- there was  
27 no zigzag in the noise log?

28 Q No. Let me restate. I appreciate

1 the clarification. Let's say you've got the  
2 zigzag in the temp survey and the crooked  
3 lines in the noise log and they line up, they  
4 overlay with one another at the same depth or  
5 approximately the same depth at least. In  
6 that instance, could you rule out a leak in  
7 that well without knowing more?

8 A I wouldn't rule it out. I would  
9 want to, you know, continue investigating  
10 because the -- with the noise log, gas is  
11 moving. If there's some response on the  
12 right frequencies of a noise log, then  
13 there's a good chance that gas is moving.

14 Q Okay. And when you say gas is  
15 moving, would that mean gas is moving from  
16 inside of the casing to outside?

17 A Well, it just depends on different  
18 factors. In the case of the pinpoint leak,  
19 it's more than likely that would be the case.  
20 In a shoe leak that's at the bottom of the  
21 well, the noise can be influenced by noise in  
22 a reservoir because gas can move in the  
23 storage reservoir and make noise even though  
24 there's no leak.

25 That's where it gets a little  
26 complicated on these shoe leaks because  
27 you've got potentially gas moving within the  
28 reservoir itself -- within the individual

1 sands of the reservoir, which I spoke about  
2 earlier, so it does get a little more  
3 complicated then.

4 Q Yeah. I'm tracking you. Let's say  
5 that you've got the overlay that we're  
6 talking about, the zigzag and the crooked  
7 lines overlaying again. Can you speak to how  
8 likely it would be in that instance that  
9 you'd be detecting a leak at that point?

10 A At the bottom of the well or --

11 Q Yes, toward the bottom --

12 A In the middle of the well -- in  
13 the middle of the well, I'd say it's very  
14 likely.

15 ALJ HECHT: This is a reminder to  
16 please not speak over one another for the  
17 benefit of our court reporters. Sorry to  
18 interrupt.

19 MR. GRUEN: Thank you, your Honor. I  
20 believe that one's on me. I'll try to do  
21 better. Thank you.

22 Q Her Honor is right. I believe I  
23 may have jumped in. Maybe just for clarity  
24 of the record, Mr. Neville, I'll ask the  
25 question again and then defer to you. I'll  
26 do my best to watch your cues for the end of  
27 the answer.

28 So if you've got the overlay with

1 the crooked lines on the noise survey and the  
2 zigzag on the temperature survey and you  
3 don't know more information than that on a  
4 well, how likely would it be that that would  
5 suggest a leak or indicate a leak in the  
6 well?

7 A That may be tough for me to answer.  
8 If it's likely enough to take a really closer  
9 look at the different zones of the well and  
10 to bring in some more data, it's not -- I  
11 can't say that, you know, it's more than  
12 likely there's a leak, but it's definitely  
13 likely. It's definitely likely that there's  
14 a shoe leak.

15 I don't know if I could say if it's  
16 more or less because many of these shoe leaks  
17 that were investigated were done well before  
18 I joined the company. They were in the  
19 initial stages of gas storage operations, and  
20 so that's my kind of caveat is I think it's  
21 likely enough when you see it in a noise  
22 response that, you know, that one needs to  
23 continue to investigate.

24 Q Okay. What if you had more than  
25 one temperature survey anomaly over time now,  
26 same depths in a well, but a noise survey now  
27 was not detecting noise at the same depth as  
28 those temperature survey anomalies. What

1 could be the causes of the temperature survey  
2 anomalies in that instance?

3 A So definitely at the bottom of the  
4 well there's the influence of the storage  
5 zone itself, there's -- one possibility is  
6 that the well is still on a little bit of  
7 flow I've seen this through. Even though  
8 everything is shut in at the surface, if one  
9 of the valves is passing a little bit of gas  
10 through it, a well could appear to have a  
11 temperature anomaly near the storage zone  
12 because there's a slight amount of flow. So  
13 that's another possibility.

14 And when I say passing gas, it's a  
15 valve that gas is moving through it. It's  
16 not completely closed. Those two, the valve  
17 issue and the fact that it's right at the top  
18 of storage zone, would be my answer.

19 Q Okay. Thank you. Let's change the  
20 hypothetical a little bit here. Now let's  
21 say you have more than one temperature survey  
22 anomaly over time and again at the same depth  
23 of the well and a noise survey that detects  
24 bubbling or moving gas all at approximately  
25 the same depth. What could be the causes to  
26 explain that other than a leak?

27 A The bubbling or moving of gas, it  
28 depends on where in the well it is. There's

1 other zones of production in some wells that  
2 can make noise of bubbling and liquid  
3 movement, but a bubbling near the storage  
4 zone or in the caprock would be something  
5 that you would want to continue to  
6 investigate, run another noise log and, if  
7 confirmed, you know, you might confirm a  
8 noise leak -- a shoe leak.

9           So it's one -- I guess what I'm  
10 saying is the confirmation of a shoe leak  
11 is -- can be tedious. It's a small movement  
12 of gas and the investigations are --  
13 usually -- they usually involve several noise  
14 logs with maybe even different pressures,  
15 several temperature surveys. If it's not  
16 conclusive, it may even be, you know, it  
17 may -- we may wait until the next year for  
18 the inventory to get higher and take another  
19 look at it before a -- the next step is a  
20 confirmed shoe leak and a workover.

21           Q   And just as you say it there, to  
22 confirm, a shoe leak is before the workover  
23 or because or as a result of the workover in  
24 that instance?

25           A   It would be -- sorry for talking  
26 over. The confirmed shoe leak would be  
27 before the workover. At some point, do the  
28 investigation of these anomalies and noise

1 issues and possibly a radioactive tracer  
2 survey, there has to be a sufficient amount  
3 of data to make the confirmation that we have  
4 a shoe leak. And then a workover rig is  
5 brought in to address it, address the shoe  
6 leak.

7 Q Yeah. Just with regards to -- it  
8 sounds like you're using an element of  
9 judgment in giving your answer here, and  
10 correct me if I'm wrong. Let me ask this:  
11 If a well experiences the ongoing anomaly  
12 over a number of years on temperature surveys  
13 and then it also experiences an overlay where  
14 noise logs are picking up bubbling or other  
15 movement of gas and maybe the R/A -- let's  
16 say the R/A tracer survey also is  
17 detecting -- detecting gas. Was it standard  
18 practice at SoCalGas to do the workover to  
19 inspect that casing in that instance or is it  
20 more of a judgment call?

21 A To some extent, it does require a  
22 bit of judgment into what the data is telling  
23 you and the fact that there could be -- the  
24 noise could be due to cross flow and not  
25 actually be a shoe leak is important. We  
26 really want to see evidence of noise above  
27 the caprock. I mean that's -- there's some  
28 things that are -- that a shoe leak would

1 almost be definite and it wouldn't be really  
2 any judgment involved here.

3 But in the case of SS-25, it was --  
4 there was these minor signs near the location  
5 of the shoe, but to the engineers at the time  
6 working the well and deciding on whether or  
7 not it was a shoe leak, they made the  
8 decision that it wasn't and for the reasons  
9 that really the noise wasn't above the top of  
10 the storage zone.

11 Now, to bring a workover rig in and  
12 address a shoe leak involves shooting holes  
13 in production casing. It can actually make  
14 the situation worse because now you're trying  
15 to fix a leak. You've got to try to  
16 perforate the casing shoe. More times than  
17 not there has to be multiple perforations  
18 into that shoe and then cement has to be  
19 pumped into it. So if there's -- if the  
20 workover is done when there's not a leak, it  
21 makes holes in the casing when there didn't  
22 need to be, so that's part of the issue of  
23 really trying to make a confirmation of a  
24 shoe leak before we go to the next step.

25 Q Okay. And regarding the next step,  
26 let's say, again, there are indications of a  
27 leak in the ways we've been discussing, or at  
28 least a possible leak. In that instance, has

1 SoCalGas ever just gone straight to plugging  
2 and abandoning a well without inspecting the  
3 casing?

4 A On a shoe leak?

5 Q Yes.

6 A Ever? I -- one thing about shoe  
7 leaks is if one confirms there is a shoe leak  
8 or might be a shoe leak, that shoe leak has  
9 to be repaired before the well is plugged and  
10 abandoned. So --

11 Q And, Mr. Neville -- oh, I'm sorry.  
12 I thought you were done. Go ahead.

13 A Yeah, I guess the question is has  
14 SoCal ever gone straight to abandonment with  
15 the diagnosis of a shoe leak? I would -- you  
16 know, I haven't seen every shoe leak, but I  
17 would tend to say that, no, that would not be  
18 the case. You would have to fix the shoe  
19 leak.

20 Q Okay. And let's expand that and  
21 talk about leaks higher up in the well. Has  
22 SoCalGas ever plugged and abandoned  
23 indications of higher leaks without  
24 inspecting the casing first?

25 A I really don't know.

26 Q Okay. How many years in a row of  
27 anomalies in a well would prompt SoCalGas to  
28 kill a well and/or inspect a casing,

1       whichever the case may be?

2               A     So by inspect the casing, you know,  
3       there's different ways to inspect the casing.  
4       A leak could be -- the casing could be  
5       inspected merely by running a tubing packer  
6       combination to see if the leak could be  
7       pumped into. Now, by -- are you asking about  
8       an actual casing inspection log?

9               Q     Not necessarily. Without going to  
10       the log and the record of it, I was just  
11       getting to the actual inspection of the  
12       casing. I recognize your point that there  
13       are different ways. But any sort of way to  
14       inspect the casing, how many years of  
15       anomalies in a well would prompt SoCalGas to  
16       inspect the casing?

17              A     It would just vary. And the  
18       reasons are the stage collar leaks and the  
19       shoe leaks, they're very, very minor in  
20       amount and they -- some of them that would  
21       just be a very small cooling on a stage  
22       collar could go a number of years without  
23       being worked on. Others that had a larger  
24       temperature anomaly would be dealt with  
25       quicker. It really has to do with the degree  
26       of cooling on the temperature surveys.

27              Q     Meaning if there was a larger  
28       degree of cooling on a temperature survey,

1 SoCalGas would be more likely to inspect the  
2 casing in that instance?

3 A In a quicker manner. There are  
4 cases of some of these stage collar minor  
5 baubles being seen one year and not the next.  
6 They're so minor that those particular cases  
7 may be gone -- may be let -- those stage  
8 collar issues may go on for a number of  
9 years.

10 But in the case of a larger  
11 cooling, those would be dealt with quicker,  
12 either by setting a downhole plug and  
13 isolating or killing the well and putting it  
14 into the -- putting the workover rig on it.

15 Q Can you give an idea of a threshold  
16 that would distinguish between a larger  
17 cooling and more of a bauble as you said?

18 A Maybe a one- or a two-degree  
19 cooling is probably on the low side. Higher  
20 than that would be -- and that's just my  
21 recollection right now sitting here having  
22 seen these casing temperature logs and when  
23 they were repaired.

24 Q Okay.

25 ALJ POIRIER: Mr. Gruen, I just wanted  
26 to check timing on this line. I'm thinking  
27 of taking a break soon.

28 MR. GRUEN: Your Honor couldn't have

1 read my mind better. That happened to be the  
2 last question of the line if you'd like to  
3 take a break now.

4 ALJ POIRIER: Okay. I think that's a  
5 good idea. Let's take a 15-minute break.  
6 That would be 2:07. We'll be off the record.

7 MR. GRUEN: Thank you, your Honor.

8 (Off the record.) ]

9 ALJ POIRIER: So we'll be back on the  
10 record.

11 We're returning from an afternoon  
12 break. We will be continuing with SED  
13 cross-examination of Witness Neville.

14 Mr. Gruen, if you can please restate  
15 the question.

16 MR. GRUEN: Yes, your Honor.

17 Q So, Mr. Neville, with regards -- we  
18 talked about -- the discussion was about shoe  
19 leaks. Largely your answers before the break  
20 were about shoe leaks. And I wanted to ask a  
21 few follow-up questions that talk about leaks  
22 at any point along the casing. Let's say  
23 that bubbling or gas was detected on a noise  
24 survey above the packer.

25 In that instance, how would you  
26 tell if you had a leak?

27 A So if bubbling were heard, I would  
28 want to see if the bubbling occurred opposite

1 a temperature anomaly. I would expect a leak  
2 in the casing to have noise that  
3 really isn't -- really isn't a bubbling-type  
4 noise. I would expect it to have a noise  
5 where all four frequencies move together and  
6 more -- more indicative of a leak in a  
7 casing -- generally bubbling is not -- is not  
8 an issue associated with a casing leak.

9 Q Okay. Let's say that you -- I'm  
10 sorry. I may have interrupted the end of  
11 your answer. Please go ahead.

12 A Yeah. I'm sorry. I just said yes,  
13 in my experience, I haven't seen bubbling  
14 associated with a casing leak.

15 Q Okay. Not just bubbling but just  
16 an indication of the movement of gas. So --  
17 and let's say further that a noise log shows  
18 the indication of the movement of gas and its  
19 opposite, or an overlay, I think, was the  
20 term you used before the break, of a  
21 temperature survey anomaly. In that  
22 instance, how would you tell if those  
23 things -- that data was showing a leak at any  
24 point along the casing?

25 A Would you mind repeating? Sorry.  
26 I didn't follow.

27 Q Absolutely. I'll do my best to  
28 restate it. It may not be precisely as

1 worded before, but I'll get the gist. Let's  
2 say that you got a noise log that is showing  
3 movement of gas either through bubbling or  
4 through some other means. Let's also say  
5 that you got a temperature survey that shows  
6 an anomaly at the same depth or approximately  
7 the same depth as where the noise survey is  
8 showing gas movement.

9 Do you understand that part of the  
10 hypothetical?

11 A So if that would be a noise  
12 deflection at the point of the bubbling and a  
13 noise deflection at the point of the casing  
14 shoe? Both?

15 Q All I'm doing -- I appreciate the  
16 clarification -- all I'm doing is saying that  
17 the temperature anomaly -- the temperature  
18 survey is showing an anomaly at approximately  
19 the same depth as where the noise survey is  
20 starting to show the crooked lines. So  
21 you've got the zigzag on the temp survey and  
22 the crooked lines on the noise survey, and  
23 they are at approximately the same depth on  
24 the well.

25 Do you have that in mind?

26 A Yeah. It's hard to -- ideally it  
27 would be, you know, to see the actual data  
28 would be the way to address it. But if

1 there's -- you're saying crooked lines  
2 that -- in the noise log opposite a  
3 temperature anomaly?

4 Q Yes. Yeah. So with that in mind,  
5 how would you tell if that data was showing  
6 you a leak on the well at any point on the  
7 casing?

8 A Well, the -- first of all, I'd need  
9 to see the data and the character -- the  
10 shape of the anomalies and the shape and  
11 amplitude of the noise and the location in  
12 the well. But generally, if you had a  
13 temperature anomaly with a noise anomaly at  
14 the same point, the leak point -- if there is  
15 a leak -- you know, there's a lot of other  
16 factors to consider. But it would be at that  
17 point. It's not going to be somewhere else  
18 in the well. It's not -- you're not going to  
19 have a temperature -- you're not going to  
20 have a casing leak several hundred feet away  
21 from the cooling. The temperature leak is  
22 going to be at the cooling and at the noise.  
23 That's the point of where the gas is moving.  
24 That's what's causing the temperature drop,  
25 and that's what's causing the noise. So it's  
26 not going to be anywhere else.

27 Q Okay. Thank you. Let's say -- if  
28 you've got a temperature survey that shows a

1 leak of -- near the reservoir, how can you  
2 tell if that's a leak and needs fixing or  
3 needs further attention?

4 A So those -- when you get down to  
5 the stored reservoir, it becomes more  
6 challenging because there is a cooling at the  
7 reservoir, and if there were a leak in the  
8 casing, like the casing shoe or slightly  
9 above the casing shoe, in an actual casing  
10 leak, I would be looking for a pinpoint  
11 cooling -- an attempt to return back to  
12 gradient and then the cooling of the storage  
13 zone. So you would see basically two points  
14 of cooling. It gets really difficult,  
15 though, the deeper you go. And again, we've  
16 got the temperature anomalies. You'd want to  
17 follow those up with the noise to help you  
18 make that diagnosis.

19 Q Let's see if I understand your  
20 answer. Going back to the zigzag term that  
21 we agreed upon earlier, if there was a zigzag  
22 in the temperature survey that was separate  
23 from the reservoir temperature that showed up  
24 on the temperature survey at a point higher  
25 than the reservoir temperature, that might  
26 suggest to you that there was a leak in the  
27 casing?

28 A If the zigzag were above the

1 temperature, it still depends on where in the  
2 reservoir. If it's in the caprock -- if  
3 it's -- if it's right above the storage zone,  
4 there's -- there's a couple very small sands  
5 that are above the storage zone that could be  
6 where -- the cause of that zigzag. They call  
7 it the S1 sand and the S2 sand. But -- so  
8 there could be movement there. But if the  
9 zigzag continues up to above the caprock,  
10 then that's where one needs to be concerned  
11 with the shoe leak.

12 And again, these are really small  
13 leaks. I know some zigzags are -- they are  
14 really -- they are tough because you got --  
15 also you have the problem of noise being  
16 carried up the hole from the reservoir. So  
17 it's really -- it's really difficult. I  
18 mean, the gas moving within the sand could be  
19 transmitting noise up the hole.

20 Q Okay. I just want to be sure I'm  
21 not jumping over you, Mr. Neville. Go ahead.  
22 Did you have more to say?

23 A No.

24 Q Okay. Thank you. Just -- you used  
25 the term again -- I think you talked about  
26 sand. You might have said "S1," I believe.  
27 And I think you said it earlier. Can you  
28 clarify, when we talk about the term "sand

1 lenses," what does that mean, sand lenses,  
2 either in the reservoir or elsewhere?

3 A So in the case of Aliso Canyon,  
4 there are these sand lenses. Some of them  
5 are very, very thin. Some of them are thick.  
6 But they -- they are named basically the S1,  
7 the S2, the S4, the S6, the S8, and then  
8 there's the frew sand. And so between these  
9 sands are actual shale barriers. So the  
10 sands are separate from each other out in the  
11 reservoir, but they are, of course, in  
12 pressure communication in the wellbore.  
13 So --

14 Q Okay. Thank you. And can you say  
15 approximately what depth is -- actually, let  
16 me strike that.

17 Is S1 the shallowest of the sand  
18 lenses then?

19 A Yes.

20 Q Okay. And approximately what depth  
21 is the S1 sand lens?

22 A Oh. It varies in every well. If I  
23 remember -- you know, we're talking the S1  
24 and the S2 and S4 may be separated by several  
25 to 10 feet, and they are fairly close  
26 together.

27 Q And can you speak at a general  
28 level, in the case of SS-25, approximately

1     how close to the surface is S1?

2             A     Oh.  To -- well, the S1 is several  
3     feet above the storage zone, which we  
4     probably -- storage zone is -- actually  
5     starts at the S4.  And there are a couple  
6     small sand lenses above -- actually several  
7     feet above the storage zone.  And above there  
8     is hundreds of feet of the shale caprock that  
9     sealed the gas in place.  But there are these  
10    two small lenses called the S1 and S2 down at  
11    the bottom of the well just right above what  
12    we call the storage zone.

13            Q     In relation to the packer -- maybe  
14    we can ask it this way.  I'm just trying to  
15    get a sense of how far down from the surface  
16    S1 is when we're looking at Well SS-25  
17    specifically.  Can you give an approximation  
18    of that?

19            A     Yeah.  I'm pretty sure it would be  
20    below the packer.  If not, it would be really  
21    close to it.

22            Q     But you don't know exactly?

23            A     I know it's within -- I don't know  
24    for sure.  It wouldn't take me long to find  
25    out, but I suspect that its below the packer  
26    but I don't know.  Very close to it.

27            Q     Yeah.  If you could get back to us  
28    and let us know.

1 A All right.

2 Q Maybe if we could request that you  
3 have that tomorrow?

4 A Sure.

5 Q Appreciate that. Okay. Thank you.  
6 Okay. If we could turn to Exhibit SoCalGas 1  
7 again, your opening testimony, and I think  
8 we're at the same part that was talking about  
9 any old temperature surveys and investigative  
10 noise and tracer surveys. If you can pull  
11 that back up.

12 You remember me talking about that  
13 on the record?

14 A Yes.

15 Q Okay. So if we say once per --  
16 maybe you can do a quick search, Mr. Zarchy,  
17 that searches "once per year."

18 ALJ POIRIER: Let's go off the record.

19 (Off the record.)

20 ALJ POIRIER: We'll be back on the  
21 record.

22 Mr. Gruen, please continue.

23 MR. GRUEN: Thank you, your Honor.

24 Q Can you see on page 5 -- I believe  
25 it's your opening testimony -- Bates page  
26 SoCalGas 1.0006, and starting on line 21, we  
27 see that you say there:

28 Once per year, and sometimes more

1 frequently, SoCalGas performed a  
2 temperature survey and  
3 sometimes -- I'm sorry -- a  
4 temperature survey by leveraging a  
5 specialized thermometer probe down  
6 the full length of each UGS well  
7 continuously reporting  
8 temperatures down the depth of the  
9 reservoir.

10 Do you see that?

11 A Yes.

12 Q So each well at Aliso received at a  
13 minimum one temperature survey per year,  
14 correct?

15 A Yes, that's the practice.

16 Q And in some cases, some wells  
17 received more than one temperature survey per  
18 year I'm reading from that.

19 Am I tracking that right?

20 A That's possible, yes.

21 Q Okay. And why would SoCalGas -- or  
22 why does SoCalGas run a temperature survey  
23 more than once per year on certain Aliso  
24 wells?

25 A A couple reasons. I think one  
26 was -- at one point in time during the  
27 initial startup of the field, there were two  
28 surveys per year. So, you know, it sometimes

1 more frequently, you know, occurred in those  
2 cases. The other time would be in the event  
3 of some anomaly at the surface, say, a well  
4 pressure -- surface pressure -- slow increase  
5 in surface pressure, and in the surface  
6 casing temperature surveys it would be run as  
7 part of an investigation into that.

8 Q Okay. Let's say that there's a  
9 temperature survey that's showing a leak.  
10 Just let's assume that for a second. Is  
11 there a correlation between how big the leak  
12 is and the extent of the cooling shown by the  
13 temperature survey?

14 A I think I would agree with that  
15 just from what I've experienced over the  
16 years. I think the larger the cooling, the  
17 larger the leak.

18 Q Okay. Thank you. But even if you  
19 had just, let's say, one degree of cooling,  
20 as shown here, even if it was even less than  
21 the degree of cooling, that could indicate a  
22 leak as well, couldn't it?

23 A It could. One degree of cooling --  
24 yes. Even a small amount of gas moving  
25 through a small surface area causes a  
26 cooling. And one degree is picked up by the  
27 temperature survey tool, and so it could be a  
28 leak.

1           Q    Thank you.  Does SoCalGas have a  
2 method for estimating how much gas is being  
3 lost by a leak on a daily basis?

4           A    There is a method to do that, yes.

5           Q    Okay.  Can you briefly describe the  
6 method?

7           A    Yes.  It's some -- it's for some  
8 leaks.  I use the stage collar leak because  
9 it's easy to understand.  A stage collar leak  
10 would be picked up by a cooling.  One way to  
11 measure the volume of the leak would be to  
12 shift the -- to set a downhole plug in the  
13 well and basically isolate the well from the  
14 reservoir and then measure an initial  
15 pressure.  So you've got a shut-in at the  
16 surface and you've got a shut-in downhole.  
17 You take a pressure reading at a particular  
18 time and then go in a number of hours or days  
19 after it and take another pressure reading.  
20 And so by the difference in pressure and the  
21 volume of the pipe over the time period that  
22 it's shut, one can estimate a leak rate.

23          Q    Okay.  How many temperature surveys  
24 were run on SS-25 -- Well SS-25 each year  
25 from 1982 to 1992?  Do you know?

26          A    Not without looking at the well  
27 files.

28          Q    Okay.  Mr. Neville, in your

1 experience, once a well casing or tubing  
2 experiences a leak and the leak is not  
3 repaired, can the leak disappear by itself?

4 A In the case of -- as I mentioned  
5 earlier, in the case of a stage collar, even  
6 a shoe leak -- although -- I'll take that  
7 back. I'm not sure on the shoe leaks. They  
8 were done -- they were dealt with a lot  
9 before I got there, but I've seen stage  
10 collar leaks, very small ones, come and go  
11 especially with the pressure in the field.  
12 But typically, the answer to the question  
13 would be no. I mean, once a leak started, it  
14 would be expected to continue.

15 Q And the stage collar, it's because  
16 perhaps the collar slid to the closed  
17 position; is that right?

18 A Well, there's -- the leak is  
19 through -- again, it's a smaller leak. It's  
20 through -- you know, potentially something  
21 got into the leak and blocked it off. That's  
22 the only thing I can think of. But typically  
23 leaks don't repair themselves.

24 Q Understood. And you're talking not  
25 just about the stage collar and the shoe here  
26 but also at any point along the casing; is  
27 that right?

28 A Yeah. For sure. A casing threat

1 leak or a casing body leak, I wouldn't expect  
2 it to repair itself.

3 Q Okay. All right. If we could turn  
4 to another line. Based on your role, Mr.  
5 Neville, as reservoir engineering manager and  
6 integrity management and strategic planning  
7 for SoCalGas and with all of your other  
8 experience with SoCalGas over the last 30  
9 years, I want to ask you a few questions  
10 about your views as to whether temperature  
11 surveys, noise logs and R/A tracer surveys  
12 serve safety-related purposes for the  
13 operation of SoCalGas natural gas storage  
14 facilities.

15 So with that in mind as the intro,  
16 if we could first ask you, in your view, are  
17 the temperature surveys, as you've described  
18 them in your testimony and as we've talked  
19 about today -- as you've talked about today,  
20 are those necessary records, in your view,  
21 for the safe operation of SoCalGas natural  
22 gas storage facilities?

23 A Are they -- they've -- are they  
24 records that indicate safe operations? I'm  
25 sorry. I didn't catch that last point.

26 Q That's okay. I can restate. Are  
27 temperature surveys necessary records for the  
28 safe operation of SoCalGas natural gas

1 storage facilities?

2 A I would say they are, the  
3 temperature, yes.

4 Q Including for Aliso Canyon wells,  
5 correct?

6 A Yes.

7 Q And Well SS-25?

8 A Yes.

9 Q Why?

10 A They -- for one, they are part of  
11 the -- they are regulation. They are part of  
12 the project approval letter. They are --  
13 they indicate -- in fact, in the project  
14 approval letter, they are called mechanical  
15 integrity tests, and they confirm mechanical  
16 integrity of the well as the temperature  
17 survey is run. So they are an indication  
18 that the well is mechanically sound at the  
19 time that it's run.

20 Q Okay. What about noise logs? Are  
21 noise logs necessary records for the safe  
22 operation of SoCalGas natural gas storage  
23 facilities?

24 A I would say yes, to help to -- to  
25 the extent they help confirm the anomalies  
26 that are -- that are from the temperature  
27 survey, I would say yes.

28 Q Okay. Do you have more to explain

1 just to get to the why of it? Is there more  
2 to it? More to the explanation as to why you  
3 see them as necessary records for the safe  
4 operation of SoCalGas natural gas storage  
5 facilities?

6 A Yeah, I would say the answer is  
7 because of the anomalies from a temperature  
8 survey, that may only be an anomaly, and that  
9 may not be indicative of a leak. And so the  
10 noise log will bolster the temperature  
11 survey, and the two of them together can  
12 constitute a mechanical integrity test.

13 Q Okay. Same question -- set of  
14 questions for the R/A tracer surveys. In  
15 your view, are R/A tracer surveys necessary  
16 records for the safe operations of SoCalGas  
17 natural gas storage facilities?

18 A Again, I guess to the -- to the  
19 same point, if they can help along with, you  
20 know, the temperature surveys and the noise  
21 log, if they can help prove mechanical  
22 integrity, then they are.

23 Q And if I'm catching the gist of  
24 this, the point is that, like the temperature  
25 surveys and noise logs, to the extent, in  
26 this case, that R/A tracer surveys can help  
27 with the mechanical integrity of the well,  
28 they are safety records, in your view; is

1 that right?

2 A Yes, I would say so.

3 Q Okay. And do R/A tracer surveys,  
4 in your experience, help with the mechanical  
5 integrity of the well?

6 A In my experience -- I've been there  
7 since 1991, I have not run one. They were  
8 run by the company before I got there and  
9 really during the early years of operations  
10 when the field was just being pressured,  
11 there were some shoe leaks at the time. And  
12 so to help with that -- those diagnoses of  
13 shoe leaks back then, there were a fair  
14 number of radioactive tracer surveys run.  
15 But since then, we haven't -- not been.

16 Q Okay. But just to be sure that I'm  
17 getting the question answered, is the answer  
18 you don't know whether R/A tracer surveys  
19 help with the mechanical integrity of the  
20 well?

21 A Well, the answer to that is yes,  
22 they do help.

23 Q Oh, they do. Okay. I  
24 misunderstood. Thank you. Okay.

25 So if we could turn to your reply  
26 testimony, SoCalGas 15, and the Bates-stamp  
27 SoCalGas 15.0013 at the bottom shown there,  
28 which is page 12, turning to line 20. So you

1 state there:

2 SED states the data in the SS-25  
3 well reveals an ongoing detection  
4 of leaks at the bottom of the  
5 well. This is a misinterpretation  
6 of the well. A review of  
7 temperature surveys indicate the  
8 shoe leak was suspected as noted  
9 on the April 24, 1985 survey.

10 However, the --

11 And continuing on the next page. I'll flag  
12 it this time. So let's turn to the next page  
13 to see the rest of the passage.

14 However, the following temperature  
15 survey on July 10, 1985 concludes  
16 that no such leak existed. Then  
17 you quote "temp anomaly similar to  
18 the break slightly higher than  
19 surveys the past several years."  
20 Noise logs 7-84, 4-84, 2-83 and  
21 R/A. 7-84 indicated no leak above  
22 S1. Will monitor.

23 And this quote is followed by footnote 29.

24 And if we scroll down the page right after  
25 "will monitor," footnote 29. Let's see  
26 footnote 29 at the bottom of the page. So  
27 footnote 29 references Exhibit Roman VII-4,  
28 and then you continue going back to the text:

1           The three noise logs and single  
2           radioactive (R/A) tracer survey  
3           are located in the well log file  
4           and indicate continued monitoring  
5           for shoe leaks, but this hardly  
6           amounts to an ongoing detection of  
7           leaks. SED states further that  
8           since there was no mention of  
9           repairing the well file presumably  
10          the leak existed at the time of  
11          the incident. This statement  
12          ignores the fact that annual  
13          temperature surveys, as well as  
14          noise logs run, do not suggest  
15          there was a leak in the SS-25.

16                   Did I read that correctly?           ]

17           A    Yes.

18           Q    Okay. And I referenced the  
19          footnote correctly, as well.

20           A    Yeah.

21           Q    Is that right?

22           A    Yes.

23           Q    Okay. So is it your contention  
24          there that there was never a leak on well  
25          SS-25 prior to October 23rd, 2015?

26           A    It's my contention, and I -- and I  
27          also hope to -- to demonstrate in that -- in  
28          the testimony, that it was the -- the -- the

1 intention, also, was there of the -- of the  
2 engineers at the time in '83, '84, '85,  
3 because they're the ones that wrote that --  
4 that text. On -- on the 1985 survey, they  
5 had -- they wrote -- whoever did the analysis  
6 said that the noise logs, the 7-84, 4-84 and  
7 2-83 and an RA tracer survey indicate no leak  
8 above the S1. So that is -- is quoting those  
9 four -- those three noise logs, plus the RA  
10 survey they believed at the time that there  
11 was no leak above the "S" -- of the S1; but,  
12 they did say that they will monitor, and  
13 that's what occurred, you know, annually,  
14 from 1985 to 2015, is, at least, annual  
15 monitoring.

16 Q Okay. And so, therefore, it's your  
17 contention that the noise and temp surveys do  
18 not suggest there was a leak in SS-25 prior  
19 to October 23rd, 2015. Do I have that right?

20 A Right. I -- I would agree with --  
21 with -- with that statement, yes. There --  
22 there was not a leak, a shoe leak, above  
23 the -- out of the storage zone above the  
24 caprock.

25 Q Okay. And not a leak, period,  
26 at --

27 A No.

28 Q -- at any point?

1           A    Sorry for talking over.

2                    Not a leak, period.

3           Q    Okay.  What about the noise logs  
4 from July 1984, April 1984 and February 1983,  
5 and the RA tracer survey -- survey that you  
6 testified to on line 3?  Is it also your  
7 testimony that none of these documents  
8 indicated leaks on well SS-25?

9           A    There were notations on the  
10 documents that indicated a possible leak, but  
11 the summation of all of the documents, and  
12 especially the -- the 7-84 noise log that  
13 showed no noise above the S1, I think it's --  
14 it's -- it's the summation of all of those  
15 documents.  Even though there were some  
16 notations as possible or probable on some of  
17 those individual logs, I -- I do believe that  
18 the summation of all of the logs indicated no  
19 leak above the S1.

20           Q    Let's -- let's take a look at the  
21 evidence, some of the evidence that you  
22 provide in support of your testimony there.

23                    So if we go to exhibit roman  
24 XII-IV, which is Exhibit SoCalGas-16  
25 identified by your counsel, which you  
26 reference on footnote 29, and let's go to PDF  
27 page 28, Bates stamp 16.0027, okay, and if we  
28 go to the next page, you see the document,

1 and if we scroll to the bottom, thank you,  
2 Bates stamp 16.0028, and this shows a  
3 temperature survey from July 10th, 1985, if  
4 we scroll to the top, I believe it shows  
5 that, do you see the notation there,  
6 July 10th, 1985, that you mention in your  
7 test -- in the passage of your testimony we  
8 just read? Do I have that right?

9 A Yes.

10 Q Okay. And this temperature survey  
11 continues for the next two pages to the page  
12 with Bates stamps 16.0030. Correct?

13 A Are you referring to those -- those  
14 individual numbers?

15 Q I am, toward the bottom.

16 A Yeah. I -- I didn't see the  
17 heading with the date. Could you --

18 MR. GRUEN: Scroll back up.

19 (Crosstalk.)

20 MR. LOTTERMAN: Mr. Neville, it might  
21 be easier for you if you looked at your hard  
22 copy in your testimony.

23 THE WITNESS: Yeah. Okay.

24 MR. LOTTERMAN: So it's exhibit --  
25 excuse me, Mr. Gruen; just to make it go  
26 faster.

27 MR. GRUEN: Yes.

28 MR. LOTTERMAN: It's Exhibit 16, and

1 Mr. Gruen has you on page 0028.

2 THE WITNESS: Okay. So that appears to  
3 be a temperature survey done on July 10th,  
4 '85, and the following two pages appear to be  
5 numbers with a date of July 10th, '85. Yes.

6 BY MR. GRUEN:

7 Q So that -- when you say, "Yes,"  
8 that's all part of the same July 10th, 1985  
9 temperature survey at well SS-25. Correct?

10 A Correct.

11 Q Okay. And that's the one that --  
12 that's -- is the basis for you contending in  
13 your testimony that you just read that  
14 concludes that the shoe leak suspected on the  
15 April 25th, 1985 survey, in fact, does not  
16 exist. Is that right?

17 A Well, the one I'm referring to was  
18 a notation on the survey. If you'd give me a  
19 chance to read the testimony again.

20 Q Sure.

21 ALJ POIRIER: Let's go off the record.

22 (Off the record.)

23 ALJ POIRIER: Back on the record.

24 We're going to take a ten-minute  
25 break until three o'clock. Thank you.

26 MR. GRUEN: Thank you.

27 ALJ POIRIER: Off the record.

28 (Off the record.)

1 ALJ POIRIER: Let's go back on the  
2 record.

3 While we're -- we took a short  
4 afternoon break. Mr. Gruen was  
5 cross-examining Mr. Neville.

6 Please continue, Mr. Gruen.

7 MR. GRUEN: Thank you.

8 Mr. Zarchy, if you could scroll  
9 down, we're looking on the screen share  
10 exhibit roman XII-IV. And that's fine. So  
11 if -- if you'd leave it there, thank you.

12 Q Mr. Neville, before we were on  
13 break, do you recall us looking at this  
14 document, which is part of Exhibit XII-IV of  
15 your testimony?

16 A Yes, I do.

17 Q Okay. And this is the July 10th,  
18 1985 survey that you contend in testimony  
19 that we -- we read before the break that  
20 concludes that the shoe leak suspected in  
21 April 25, 1985 survey, in fact, did not  
22 exist. Is that right?

23 A So I've had a chance to look  
24 through the testimony again, and the  
25 exhibits, and it may be, I think, in -- in  
26 order to unravel this, I think I'm going to  
27 have to go to the testimony -- back to the  
28 testimony again, if you don't mind, to --

1 Q Sure.

2 A -- page --

3 (Crosstalk.)

4 MR. GRUEN: Mr. Zarchy, if you would.

5 Q And we have there -- is that the  
6 testimony that you need us to return to,  
7 Mr. Neville? This is the one that references  
8 footnote 29, which, in turn, references  
9 Exhibit XII-IV, I believe.

10 If we scroll down, Mr. Zarchy, to  
11 the bottom of the page.

12 A Okay. So page 13, the top of  
13 page 13, and -- and what I have on line 2,  
14 these are quotations from the records.

15 And so to read the quotations, it  
16 says, "Temp anomaly similar to, but breaks  
17 slightly higher than surveys of past several  
18 years."

19 And this was done on the 1985  
20 survey. But, then again, it's -- to continue  
21 on, it says, "Noise logs, 7-84, 4-84, 2-83,  
22 and RA 7-84 indicate no leak above S1."

23 And it's -- in the testimony,  
24 there's a -- there's a period after "RA."  
25 But --

26 Q Okay.

27 A -- there should not be a period  
28 there, because there are -- those four

1     investigative -- actually, the three  
2     investigative noise logs and the RA 7-84  
3     indicate no shoe leak -- no leak above S1.

4             And so that quotation is taken from  
5     the exhibit. It's not on the temperature log  
6     itself, but it's on the four pages, then, on  
7     one of the exhibits, on the activity report.

8             Q     Okay.

9             A     So --

10            Q     Go ahead. Pardon me.

11            A     But, if we could go back to the  
12     exhibit again --

13            MR. GRUEN: Go ahead, Mr. Zarchy.

14            THE WITNESS: So Exhibit 1-3, so the  
15     first is the actual temperature survey, as we  
16     discussed, July 10th, '85. The second page  
17     and the third page are the numbers associated  
18     with that survey. The fourth page are what I  
19     call the conclusions that were made at the  
20     time. And if you -- if you go one more  
21     page --

22            MR. GRUEN: Go ahead, Mr. Zarchy,  
23     follow him to the fourth. Actually, if  
24     you'll go one more.

25            THE WITNESS: Yeah.

26            MR. GRUEN: Yeah.

27            THE WITNESS: So if you go to the date,  
28     7-16-85, yeah, and stop there, so in -- in

1 '85, which corresponds to that July survey,  
2 that -- the summary was made at that time,  
3 and it mentions what I had in quotes in my  
4 testimony. It said, "Ran temperature survey,  
5 anomaly above shoe similar to, but breaks  
6 slightly higher than, surveys of past several  
7 years." And then it says, "Noise logs 7-84,  
8 4-84, 2-83 and RA 7-84 indicated no leakage  
9 above S1, will monitor."

10 So it's that text on that report  
11 that I included in my testimony to indicate  
12 that the engineers at the time believed that  
13 there was no shoe leak.

14 BY MR. GRUEN:

15 Q Okay. So if I understand  
16 correctly, you're relying on --

17 Mr. -- Mr. Zarchy, could you scroll  
18 to the top of this document?

19 So you're relying on this document  
20 entitled "Well Activity Reports for SS-25"  
21 in -- in order to make your con- -- support  
22 your conclusion that the July 10, 1985  
23 temperature survey concluded that the shoe  
24 leak suspected on April 25th, '85 -- that  
25 survey did not exist. Am I tracking that  
26 correctly?

27 A I would say I'm relying on the --  
28 the remarks here to demonstrate that the --

1 the engineers at the time who reviewed the  
2 '84 data, the three noise logs and the RA  
3 tracer survey, concluded in their remarks  
4 that there was no shoe leak, and that's what  
5 I hoped to demonstrate here, was that the  
6 engineers there at the time concluded there  
7 was no shoe leak.

8 MR. GRUEN: Mr. Zarchy, if we could go  
9 back to the testimony to the page we were  
10 just looking at, and if we go to the -- the  
11 prior page, I want to read the full sentence  
12 where it says, "However, the," and continuing  
13 the next page, "following temperature survey  
14 on July 10, 1985 concludes that no such  
15 leak -- such shoe leak existed."

16 Q So, Mr. Neville, is -- from reading  
17 what you just read, where does it follow that  
18 the -- from the July -- following the  
19 July 10th, 1985 temperature survey that  
20 information specifically enabled the  
21 conclusion that no such shoe leak existed?

22 A I think when I say following the  
23 temp survey on July 10th, obviously, that --  
24 you know, that's a year or so after all of  
25 the '84 work. The conclusion is made on --  
26 in the activities remarks, which was  
27 July 17th, if I remember -- July 16th.

28 So in line number one, following

1 temperature survey on July 10th, '85,  
2 concludes that no sur -- such shoe leak  
3 existed, and I just point to that -- to the  
4 summary in the remarks section of that  
5 activities report as showing that the  
6 conclusion was made at that time.

7 Q Okay. I'm tracking what you're  
8 doing here.

9 Mr. Zarchy, if we could go back,  
10 just to confirm, to the temperature survey we  
11 just looked at in Exhibit XII -- roman  
12 XII-IV, and if we scroll up, just for  
13 purposes of --

14 If I'm fully tracking, if I'm  
15 understanding correctly, is it your testimony  
16 that you could not turn to any part of this  
17 actual temperature survey to find a  
18 conclusion that the shoe leak suspected on  
19 the April 25th, 1985 survey, in fact, did not  
20 exist? You could not find that conclusion in  
21 this specific -- the actual July 10th, 1985  
22 temperature survey. Am I understanding that  
23 correctly?

24 A I would say that's correct. I -- I  
25 think, based on this survey itself, that's a  
26 correct statement.

27 Q Okay. So if we could scroll down  
28 again to the next -- to the -- keep going --

1 to the well activity reports for SS-25 here,  
2 Mr. Neville, so, in relying on the well  
3 activity reports for SS-25, is it your  
4 methodology to say that the well activity  
5 reports for SS-25 should be the governing  
6 document over what the temperature and noise  
7 surveys say, then?

8 A Did you ask should the -- the  
9 remarks section be the governing document?

10 Q The well activity reports for SS-25  
11 document, is it your view that that's the  
12 governing document over the temperature and  
13 noise surveys themselves?

14 A No. I would say that the surveys  
15 themselves are the -- the documents of  
16 record. That's the data. But, I would say  
17 that the conclusions were noted in the  
18 remarks section.

19 Q Okay. Understood.

20 Let's turn -- if we scroll back up,  
21 Mr. Zarchy, if you could scroll up to the  
22 graph part of the survey, and I'll -- I'll  
23 note the Bates number again. If we go down  
24 to the bottom of that for a moment, the Bates  
25 number is SoCalGas 16.0028. And if you  
26 scroll up --

27 So if we look at the data here,  
28 doesn't this temperature survey show the

1 zigzag that we were talking about earlier, at  
2 a conceptual level?

3 A So the temperature survey shows  
4 a -- a deviation of slightly above the S1 --  
5 I think the S1 is on there -- certainly,  
6 above the S4. The largest cooling is the  
7 storage zone. So there is a secondary  
8 cooling above the storage zone. However, a  
9 noise log, when run across that temperature  
10 anomaly, doesn't show any noise above the S1.  
11 So that was the conclusion. You know,  
12 this -- this isn't a -- this is the  
13 temperature anomaly, but it's the summation  
14 of the three noise -- '84 noise logs and the  
15 RA tracer that were used to discount a shoe  
16 leak.

17 Q Okay. So, just so I'm  
18 understanding, I just want to back up for a  
19 second.

20 What we're saying -- what this  
21 shows us here, this July 10, 1985 log, the  
22 graph shows that there's a zig, if you will,  
23 of approximately 17 degrees of cooling, and  
24 then a zag, if you will, of approximately  
25 27 degrees of warming trend --

26 A Could you give me the graph --

27 Q -- at approximate -- at  
28 approximately -- I was just getting there.

1 And I'm sorry for speaking over you.

2 If I'm reading right, it's at  
3 approximately just above 8500 feet. Does  
4 that look right to you? Would you agree?

5 A Yes.

6 Q Okay.

7 A That --

8 Q Go ahead.

9 A That cooling that you're referring  
10 to at approximately 8500 feet is the storage  
11 zone, is due to the storage zone, and the  
12 reason I know that is, if you follow the --  
13 the cooling over to the wellbore diagram,  
14 somebody's notated S4. So that is --  
15 somebody has die -- has put -- which is  
16 typical in our noise logs. But, the S4 is  
17 designated on the wellbore diagram to make  
18 these readings and -- and an -- an analysis  
19 of the -- the shoe leaks, potential shoe  
20 leaks, easier, because the geology is noted  
21 on the -- on the data.

22 Q Okay. What -- what about if -- if  
23 you could -- and I -- I understand -- I think  
24 I get your explanation.

25 But, what about the line, if you'll  
26 indulge the term, zigzag, again? It looks  
27 like approximately 8000 feet to maybe, oh,  
28 8400 feet there's another smaller zigzag that

1 maybe there it shows about a degree of  
2 cooling there. Would you agree with that  
3 approximation?

4 A Right. And that's what would -- we  
5 would call a temperature anomaly.

6 MR. GRUEN: Okay. Okay. All right.  
7 Let's go to -- if we could enlarge this to  
8 where the notations are at approximately  
9 8500 feet, and it may require a scrolling  
10 over, is it possible to enlarge even further?

11 Q And scrolling down, so there, we  
12 see the -- the words, SSSV, at the top, and  
13 next to it, if my -- my reading is correct,  
14 that's 8451 feet. Is that right,  
15 Mr. Neville?

16 A Yes, that looks correct.

17 Q Okay. And that stands -- SSSV  
18 stands for the subsurface safety valve that  
19 was inside the two and seven-eighths-inch  
20 tubing. Correct?

21 A It was integral to the tubing  
22 itself. It's the -- this was run in nine --  
23 1985. The -- the valve itself had been  
24 pulled, but the -- the housing, so to speak,  
25 is -- is being referred to here as the SSSV  
26 housing. It's --

27 Q Understood. And when you say that  
28 the subsurface safety valve had been pulled,

1 that means it was no longer working at this  
2 point in time, as -- at the time of this  
3 survey, is that correct, nine -- July of  
4 1985. Correct?

5 A Yeah, it wasn't working, really.  
6 Yes, it wasn't in -- in place. It hadn't  
7 worked. It -- it failed. But, it wasn't in  
8 place, nor working.

9 Q And you said the housing was still  
10 there, so meaning there was something inside  
11 the tubing at approximately 8451 feet.  
12 Correct?

13 A Correct.

14 Q Okay. Was it stuck?

15 A No. It's actually threaded to the  
16 tubing itself. It screws into the tubing.  
17 So the -- the top of that housing screws into  
18 the tubing, and the bottom of it screws in  
19 the tubing. So --

20 Q Okay.

21 A -- it's impossible to pull that  
22 section out without pulling the whole tubing  
23 out.

24 Q But, SoCalGas chose not to?

25 A That's correct.

26 Q Okay. I think I want to just  
27 understand, where this subsurface safety  
28 valve housing screws into the tubing, does

1 that mean the screws -- they actually screw  
2 through the tubing? Is that right?

3 A No. The -- the threading on the --  
4 the housing of the valve would be the same  
5 threading on the tubing. So there's two  
6 pieces of pipe that screw together, not --  
7 not one within the other. They just screw  
8 together.

9 Q Where -- where is the subsurface  
10 safety valve in relation to the holes that  
11 you've described as crossover ports in your  
12 testimony?

13 A It's generally here, what's noted  
14 as the tops of these -- you know, these  
15 components can be of different lengths, like  
16 the subsurface safety valve is -- housing  
17 is -- is a certain length. I don't know  
18 that, offhand. So in -- normally, in -- in  
19 wireline situations, we note the tops on our  
20 schematics.

21 Q Okay.

22 A That's where it's threaded in. The  
23 actual location where the valve would be  
24 placed and the crossover port are going to be  
25 lower than 8451. ]

26 Q If I could use the term "holes"  
27 because I think I understand them better  
28 instead of "crossover ports," I think we had

1 talked about that working for you. So if I'm  
2 understanding right, you're saying that the  
3 holes that were in the tubing are below where  
4 the subsurface safety valve housing is, the  
5 depth where the subsurface safety valve  
6 housing is, the 8,451.

7 Am I tracking that correctly?

8 A Yeah. I guess ports -- you know,  
9 holes could mean kind of they're  
10 unintentionally there, but a port is  
11 intentionally there. So, you know, it's --  
12 I'm fine using the word "holes" to the extent  
13 that they're -- they are part of the  
14 subsurface safety valve system. They're  
15 intentionally there.

16 Q On-purpose holes, if I'm tracking  
17 that right --

18 A Right.

19 Q -- so to speak? Okay. Understood.

20 A Okay.

21 Q Helpful for my understanding.

22 A Okay.

23 Q Turning to the next item there,  
24 "WSO," which looks like, if I'm reading  
25 correctly, it's a bit difficult, but is that  
26 8,475 feet deep?

27 A Yes.

28 Q And what does WSO stand for?

1           A    Well, the term is a water -- it's  
2    called a water shutoff hole.

3           Q    Okay.  And what does water shutoff  
4    hole mean?

5           A    All right.  So what was done in --  
6    to confirm cement integrity during the wells  
7    drilled in the earlier part of -- actually it  
8    was done in I think wells -- prior to  
9    conversion to gas storage.  The water shutoff  
10   holes were intentionally shot in the casing  
11   after the casing was cemented.

12                    The idea being that if one shoots a  
13   hole in the production casing and actually  
14   has a kind of a negative pressure situation  
15   set up, so they would run a fluid column in  
16   the tubing, which would set up a negative  
17   differential, if there were no water flowing  
18   in, the term "past the water shutoff," so  
19   that's where it gets in.

20                    No water coming into that hole  
21   means that the cement integrity between the  
22   zone of production, which became the storage  
23   zone, it was used to prove cement integrity.  
24   It showed that water could be shut off.  The  
25   water would come in since it was an  
26   oil-to-gas zone, the water would be coming in  
27   from above, another place.  So --

28           Q    Let me track that.  Oh, go ahead.

1 I'm sorry to interrupt.

2 A Yeah. The short answer to the  
3 question is that it was a method approved and  
4 required by DOGGR to demonstrate cement  
5 integrity of the cement above the intended  
6 zone of production.

7 Q I'm going to try and put that in  
8 lay terms. Correct me if it sounds like I'm  
9 going to -- like I'm amiss. At some point  
10 for the WSO, SoCalGas -- and, again, put more  
11 on-purpose holes into the casing this time to  
12 see if there would be gas coming into the  
13 well at that depth, and then at some point  
14 water came in, and then at some point, once  
15 the water came in, SoCalGas wanted to plug  
16 the holes or the perforations, if you will,  
17 with cement.

18 I'm saying it in much less  
19 sophisticated terms, but am I tracking your  
20 answer correctly?

21 A No, not really.

22 Q Okay.

23 A So water shutoff -- this practice  
24 was done before modern casing cement  
25 evaluation logs. This was done by Tidewater  
26 and it was done in the '53, '54 time of  
27 drilling the well. The casing, after it was  
28 run, was cemented.

1                   In order to demonstrate to DOGGR  
2                   that the cement was placed and sealed off the  
3                   production, a test was run to see if the  
4                   holes would actually flow anything. If the  
5                   holes didn't flow anything, then the cement  
6                   was deemed sufficient. It was a good cement  
7                   job.

8                   Q     Okay.

9                   A     So there wasn't any additional  
10                  cementing after that, but it was merely a  
11                  demonstration -- the holes were shot  
12                  inside the cement and proved, you know, at  
13                  the time that the cement integrity was there.

14                  Q     Okay. If we could -- so with the  
15                  8,475 depth of the water shutoff in mind --

16                                 If we could zoom back out,  
17                  Mr. Zarchy, on this page, staying on this  
18                  page but zooming out slightly.

19                                 You see the 8,475, those water  
20                  shutoffs are at approximately the same depth  
21                  as temperature anomaly; is that right? Shown  
22                  on this graph; is that right?

23                  A     Well, by coincidence they're at the  
24                  same depth of the temperature anomaly and the  
25                  S4, which is the storage zone. So you're  
26                  right. They are there at that same depth.

27                  Q     Understood. Mr. Neville, isn't it  
28                  possible that the water shutoffs in Well

1 SS-25, the cement in them started leaking by  
2 July 10, 1985, as shown by the cooling on  
3 this graph?

4 A Not as shown by this cooling.  
5 Again, there was -- you could see the S1  
6 right above the S4. There was no noise  
7 indicated in the noise logs above the S1, so  
8 there's no leak. If there were noise above  
9 the S1 and continuing up to what's called the  
10 MP and above, if there were a noise over a  
11 longer period of time, one could possibly say  
12 that the water shutoff holes were leaking or  
13 it could have been through the shoe or  
14 through the packer. But there was no leak --  
15 and what we call a leak is a leak outside of  
16 the, you know, away from the storage zone.  
17 There was no noise above the S1 so --

18 Q Go ahead.

19 A Yeah. So I can't say that, you  
20 know, the water shutoff holes, you know, the  
21 gas wasn't moving between the water shutoff  
22 holes and the S1 or the water shutoff holes  
23 and the S4. They're so close to the S4,  
24 they're so close to the storage zone, there  
25 could have been some gas movement there at  
26 that time, but it wasn't the shoe leak, which  
27 by definition is the leak outside of the  
28 storage zone.

1           Q    Let me just understand that.  So is  
2   it possible that the cement that plugged the  
3   SS-25 water shutoffs had deteriorated by  
4   July 10, 1985?

5           A    It's not something that we -- that  
6   I've seen normally that the water shutoff  
7   holes deteriorate.  I suppose it's -- yeah, I  
8   can't deny that -- I mean -- because the  
9   storage zone is right there at the water  
10  shutoff holes and there's such an  
11  overwhelming cooling with regard to the  
12  storage zone, it really overmasks anything  
13  that the water shutoff holes would do.  So I  
14  really couldn't say one way or the other.

15          Q    So you can't -- okay.  So based on  
16  this graph, even with the storage zone, you  
17  can't say that it's impossible that the water  
18  shutoff was leaking gas?

19          A    I can't say that there's not gas  
20  moving into the holes that the water shut  
21  off.  It's not -- I don't -- just looking at  
22  this data, I don't think it's possible to say  
23  that.  But the fact that the gas doesn't move  
24  above the S1 is the reason there isn't a shoe  
25  leak.

26          Q    Mr. Neville, have other water  
27  shutoffs in Aliso Canyon wells been found  
28  leaking in the past?  Have you found that to

1 be the case?

2 A I have found, if I recall, water  
3 shutoff causing a shoe leak.

4 Q Okay.

5 Let's scroll back just into the  
6 notations, Mr. Zarchy, if we could.

7 So there you see packer or "PKR."  
8 That stands for packer; right?

9 A Right.

10 Q And that's at 8,486 feet?

11 A Right.

12 Q Okay. Just for relationship.  
13 Okay. And "Perf" stands for perforations  
14 below packer?

15 A Yes.

16 Q So there were -- these are more  
17 on-purpose holes?

18 A Yes, they would have been on  
19 purpose.

20 Q And that's in the casing; right?

21 A Yes.

22 Q In that case. At depths of  
23 8,510 feet and 8,538 feet; right?

24 A Right.

25 Q Okay. All right. With that, I  
26 want to ask you a few more questions about  
27 the noise and temp surveys from Well SS-25.  
28 I recall that this exhibit was provided as a

1 reference to Footnote 29, which was cited at  
2 the end of the sentence on page 13, lines 2  
3 to 3. And as we talked about, if we could go  
4 back to that, back to the reply testimony.  
5 Thank you.

6 So we were talking about those  
7 lines of testimony, the noise logs, the R/A,  
8 radioactive, tracer survey. Just with that  
9 in mind, let's go back to Exhibit  
10 SoCalGas-16, the exhibit to your reply  
11 testimony and let's turn to several pages  
12 down. Yeah.

13 Mr. Neville, what do you call this  
14 document that says, "Well Activity Reports  
15 for SS-25" at the top?

16 A Yeah, that's exactly what I call  
17 it. It's the Well Activity Reports for  
18 SS-25.

19 Q Okay. Just referring to -- I want  
20 to just probe this exhibit here, Exhibit 7-4.  
21 Can you show us where in this exhibit you  
22 provide the noise logs from July of '84,  
23 April of '84, and February of 1983 that you  
24 note in your testimony?

25 A Yeah, I didn't provide the noise  
26 logs in the testimony. I wanted to  
27 demonstrate that the engineers at the time  
28 confirmed no shoe leak. I didn't include the

1 noise logs in the testimony.

2 Q Okay. How about the July 1984 R/A  
3 tracer survey that you mention in your  
4 testimony. Is it -- did you provide it with  
5 supporting exhibits?

6 A Let me quickly check. It's not in  
7 this section of testimony, the reply  
8 testimony. I don't see it.

9 Q I want to be sure you've had a  
10 chance to complete your answer so I'll stand  
11 by if you'd like.

12 ALJ POIRIER: Let's go off the record.

13 (Off the record.)

14 ALJ POIRIER: Back on the record.

15 Please go ahead, Mr. Neville.

16 THE WITNESS: So I believe the question  
17 was did I supply any of the other 1984 noise  
18 logs or R/A tracer surveys in the testimony,  
19 and I can point to 1984 R/A tracer survey in  
20 the sur-reply testimony.

21 ALJ POIRIER: Is there an exhibit  
22 number on that?

23 THE WITNESS: It's Exhibit 1-2.

24 MR. LOTTERMAN: Actually, your Honor, I  
25 believe he's talking about SoCalGas  
26 Exhibit-22, beginning at page 0010.

27 Is that right, Mr. Neville?

28 THE WITNESS: Yeah. I'm trying to --

1 that is right. I'm trying to determine if  
2 it's a part of the data request in front of  
3 it, which I believe --

4 ALJ POIRIER: Let's go off the record  
5 again.

6 (Off the record.)

7 ALJ POIRIER: Let's go back on the  
8 record.

9 Mr. Neville, you can continue.

10 THE WITNESS: Okay. So if you can go  
11 to the testimony 21.0017.

12 MR. GRUEN: Let's follow him if you  
13 could, Mr. Zarchy, just so we're tracking.  
14 Should we be -- I think we should be  
15 scrolling up on the screen share.

16 Q Am I tracking that correctly,  
17 Mr. Neville?

18 A Yes. We're going to go to 21.0017.

19 Q 21.0017?

20 ALJ POIRIER: Let's go off the record  
21 again until we get the document up.

22 (Off the record.)

23 ALJ POIRIER: Let's go back on the  
24 record.

25 Mr. Lotterman, please go ahead and  
26 correct us where you think the information  
27 is.

28 MR. LOTTERMAN: Yes. Are we back on

1 the record?

2 ALJ POIRIER: Yes, we are.

3 MR. LOTTERMAN: I see.

4 Mr. Neville, Judge Poirier asked you  
5 where specifically in your testimony or  
6 exhibits are the study or studies you  
7 referred to. He doesn't want to -- he did  
8 not ask why you put them in or he did not ask  
9 you to link them to your testimony. So if  
10 you wouldn't mind turning to Exhibit 22,  
11 page .0010 through 19.

12 Are you with me? Mr. Neville?

13 THE WITNESS: Yes, yes. That's  
14 correct, yes.

15 MR. LOTTERMAN: So is that the tracer  
16 study -- is that the specific reference to  
17 the tracer study that you just talked about  
18 earlier?

19 THE WITNESS: Yes.

20 MR. GRUEN: Mr. Zarchy, if we could  
21 scroll down briefly to take a look at that to  
22 show his Honor.

23 Q Mr. Neville, are we tracking on the  
24 share screen the tracer survey for SS-25 that  
25 you referred to in testimony?

26 A Yes.

27 Q And it's part of exhibit -- if we  
28 scroll up, you're saying it's part of

1 Exhibit I-2?

2 A Yes.

3 Q Is it a complete copy of the  
4 survey?

5 A I don't know.

6 Q Okay. Thank you.

7 Your Honor, I see that we're -- I'm  
8 mindful of the time and of your guidance,  
9 your instruction that we finish by  
10 approximately 3:50. This can conclude the  
11 line of cross and give us a few minutes for  
12 housekeeping if you'd like.

13 ALJ POIRIER: That's fine. That makes  
14 sense. Thank you.

15 MR. GRUEN: Thank you, your Honor.

16 ALJ POIRIER: Let's go off the record.

17 (Off the record.)

18 ALJ POIRIER: We'll be back on the  
19 record.

20 While we were off the record, we  
21 handled some housekeeping matters. We  
22 confirmed that SED has exhibit numbers up to  
23 SED-399, so for now that should be  
24 sufficient. We also requested some additions  
25 to the format of the proceeding schedule from  
26 SED and reiterated that SoCalGas must provide  
27 searchable copies of the PDFs of its  
28 testimony and exhibits. Okay.

1                   If there are no other matters, we're  
2 going to conclude for the day. Thanks,  
3 everybody. We'll be restarting at 10:00 a.m.  
4 Thank you and we will be off the record.

5                   (Whereupon, at the hour of 3:49  
6 p.m., this matter having been continued  
7 to Tuesday, May 4, 2021, at 10:00 a.m.,  
via virtual proceeding, the Commission  
then adjourned.) ]

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BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE  
STATE OF CALIFORNIA

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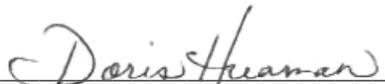
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