

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE
STATE OF CALIFORNIA



FILED
05/26/21
12:50 PM

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 19, 2021
Pages 2783 - 2931
Volume 20

Reported by: Andrea L. Ross, CSR No. 7896
Shannon Ross, CSR No. 8916
Carol Ann Mendez, CSR No. 4330

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

I N D E X

WITNESSES:	PAGE
RODGER SCHWECKE	
Cross-Examination Resumed By Mr. Gruen	2785
Cross-Examination By Ms. Bone	2815
RODGER SCHWECKE (Resumed Stand)	
Redirect Examination By Ms. Patel	2834
Redirect Examination Resumed By Ms. Patel	2877
Recross-Examination By Mr. Gruen	2889
Recross-Examination By Ms. Mandelbaum	2893

Exhibits:	Iden.	Evid.
SoCalGas-02	2901	2901
SoCalGas-23	2901	2901
SoCalGas-24	2901	2901
SED-218	2903	2903
SED-219	2903	2903
SED-258	2903	2903
SED-276	2903	2903
SED-281	2903	2903
SED-310	2903	2903
SED-312 to SED-323	2903	2903

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

VIRTUAL PROCEEDING

MAY 19, 2021 - 10:00 A.M.

* * * * *

RODGER SCHWECKE,

resumed the stand and testified further as follows:

ADMINISTRATIVE LAW JUDGE POIRIER: We will be on the record. Good morning. These are the evidentiary hearings for Investigation 19-06-016, the Investigation into Aliso Canyon gas leak. We are continuing with evidentiary hearings. When we left off yesterday, Mr. Gruen of SED was crossing Mr. Schwecke. We are going to continue with that.

Please go ahead, Mr. Gruen.

MR. GRUEN: Thank you your Honor.

CROSS-EXAMINATION RESUMED

BY MR. GRUEN:

Q Good morning, Mr. Schwecke.

A Good morning.

Q Wanted to be sure you could hear me okay. Okay. Continuing on from yesterday, do you recall yesterday that you mentioned a hydrate plug was blocking the tubing during the incident?

1 A Yes, I do.

2 Q And the hydrate plug was identified
3 after the first well-kill attempt; correct?

4 A I believe it was identified during
5 the first well-kill attempt.

6 Q Thank you. Mr. Schwecke, did you
7 observe the cross-examination of Mr. Dan
8 Neville?

9 A Parts of it.

10 Q Okay. Do you recall that
11 Mr. Neville testified that during a 2007
12 maintenance activity SoCalGas could put a
13 Wireline plug in the tubing below the SSSV,
14 or subsurface safety valve, in Well SS-25?

15 A I do not recall that from
16 Mr. Neville's testimony.

17 Q Okay. Let's go to the transcripts
18 then just as a demonstrative exhibit that
19 show Mr. Neville's testimony. If we could
20 pull that up. And this is -- if we go to the
21 cover page, this is -- bear with me. I'm
22 just going to adjust my screen so I can
23 better see the exhibit.

24 This is the transcripts from the
25 evidentiary hearings of I.19-06-016. This
26 shows it's the reporter's transcripts from
27 the proceeding dated May 5, 2021, page 2033
28 through 2173, Volume 15. If we could go to

1 page 2055, lines 19 through 26.

2 We see here question starting on
3 line 19:

4 QUESTION: Okay. And was the
5 wireline plug that was installed
6 in the tubing below the subsurface
7 safety valve?

8 ANSWER: It would be below the
9 subsurface safety valve. It
10 doesn't say that here, but it --
11 that profile for which wireline
12 plugs are set in this well is
13 below the subsurface safety valve.

14 Do you see that?

15 A I see those statements.

16 Q Do you agree with Mr. Neville's
17 explanation that a Wireline plug would be
18 placed below the SSSV in Well SS-25?

19 A It's hard for me to state an
20 opinion with regard to this without being
21 able to see basically the entire transcript
22 that led up to this statement.

23 Q Okay. Fair enough. Let's go on,
24 then, just with this statement in mind.
25 Yesterday, if you recall, I asked you about
26 the apparent decision on October 24, 2015,
27 not to install a Wireline plug in SS-25 to
28 stop the flow of gas.

1 Do you remember that?

2 A Generally, yes.

3 Q Okay. And that's -- I'm asking at
4 a general level, so thank you for the answer.
5 Let me ask you, if you know, what is a Camco
6 safety nipple?

7 A I do not know specifically that
8 defined term, but it's part of the Camco
9 system that was in place when there was a
10 subsurface safety valve installed in that
11 profile or whatever you want to call the
12 configuration that was in the well.

13 Q Thank you, Mr. Schwecke. That's
14 probably adequate for our purposes.
15 Appreciate that. And, in fact, SoCalGas
16 could not install the Wireline plug during
17 the incident below the Camco safety nipple in
18 SS-25 on October 24, 2015; is that correct?

19 A Again, I do not know specifically
20 that we could not, but we had a situation
21 that was very dynamic. We did not have
22 perfect information, so we did not know the
23 condition of that particular area, and an
24 attempt to set a Wireline plug could actually
25 cause more damage, could cause more harm and
26 prevent future well-kill operations.

27 Q Okay. Let's look at Exhibit
28 SED-323, which was served this morning before

1 9 a.m. If we go to the Bates number, we see
2 there the Bates number is
3 AC_CPUC_SED_DR_33_0000060. If we scroll up
4 to the top, we see here -- let me ask you
5 just to lay a foundation. Are you
6 familiar --

7 MS. PATEL: Your Honor, can I -- your
8 Honor, may I interject here? Can the witness
9 please have a moment with this exhibit. It
10 was served, as Mr. Gruen said, before 9 a.m.
11 this morning which is well past the 1 p.m.
12 deadline that was set by your Honors. If he
13 could just have a moment to review the
14 document.

15 MR. GRUEN: Your Honor, no objection,
16 but I might note this is served as an
17 impeachment exhibit in compliance with your
18 Honors' instructions. So with that, we have
19 no objections to the witness reading the
20 exhibit.

21 ALJ POIRIER: We'll go off the record
22 for a brief moment and let the witness look
23 at the document, so off the record.

24 (Off the record.)

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

27 Mr. Gruen, please continue.

28 MR. GRUEN: Thank you.

1 Q Mr. Schwecke, are you familiar with
2 this document as part of SoCalGas' response
3 to SED's Data Request-33?

4 A No, I am not. I did not see this
5 document until it was presented this morning.

6 Q Okay.

7 Well, your Honor, we need an
8 opportunity to lay foundation with someone
9 who can confirm this document. This was part
10 of the issue that we raised when we filed a
11 motion that SoCalGas' witnesses -- they
12 identify which witness could indeed
13 authenticate and help us lay foundation for
14 each document, and now we seem to be back to
15 that problem again that we identified in our
16 motion.

17 MS. PATEL: Your Honor, I don't think
18 that we're disputing the authentication. I
19 see that it has a Bates number on it.

20 MR. GRUEN: Would SoCalGas stipulate to
21 this document going into the record?

22 MS. PATEL: No, your Honor, I'm saying
23 that we're not disputing its authenticity.

24 ALJ POIRIER: Mr. Gruen, why don't you
25 go ahead and ask the questions that you would
26 like to ask and we'll go from there.

27 MR. GRUEN: Okay.

28 Q Mr. Schwecke, if we go to the top,

1 this is an e-mail from Thomas Egbert to Todd
2 Van de Putte at 9:33 a.m. on October 24,
3 2015; correct?

4 A That's what it says, yes.

5 Q Thank you. If we go to the second
6 paragraph, Mr. Egbert says, "Here is a quick
7 summary events and current status of the
8 SS-25 well kill."

9 Do you see that?

10 A Yes, I see that.

11 Q Mr. Schwecke, do you recall me
12 asking yesterday whether you were involved in
13 the initial decisions or well-kill attempts
14 before November 11, 2015?

15 A Yes.

16 Q And your answer was you were not;
17 is that correct?

18 A That is correct.

19 Q So the information in this
20 well-kill update shown in this e-mail here
21 was made before you were involved in the
22 initial decisions or well-kill attempts;
23 correct?

24 A That is correct. It was obviously
25 on the morning after the leak was discovered.

26 Q Were you apprised of this
27 information once you came on board?

28 A Generally, yes.

1 Q Okay. Looking at the first bullet
2 in this e-mail, it says Alan Fortenberry is
3 managing all well-kill operations.

4 Do you see that?

5 A I see that statement.

6 Q And the second bullet states:

7 Western Wireline is on-site but on
8 standby should we decide to set a
9 plug. Due to the configuration of
10 the tubing hardware below the
11 packer, we are not certain
12 Wireline it is possible to set a
13 stable plug below the empty Camco
14 Safety Nipple (communication port
15 between casing and tubing below
16 the packer).

17 Do you see that?

18 A Yes, I do.

19 Q So in this e-mail, Mr. Egbert
20 confirms that Western Wireline was there, but
21 was on standby to set a plug; correct?

22 A Yeah, Western Wireline was on-site
23 to assist in the kill operation and that
24 included setting the plug if it was
25 determined to be feasible.

26 Q And in the next sentence,
27 Mr. Egbert says, "Due to the configuration of
28 the tubing hardware below the packer."

1 Do you see that?

2 A That's what this e-mail -- which I
3 would say it appears to be a draft e-mail
4 that he provided to Todd Van de Putte for
5 Todd's edit and forwarding if he wanted to.

6 Q So the configuration of the tubing
7 hardware below the packer was causing a
8 problem for setting a plug; correct?

9 A No. I don't think Tom is saying
10 that. I think it could be causing a problem
11 because we didn't know the circumstances that
12 were occurring downhole basically 12 hours
13 after the leak was found. So it's really
14 saying that we may not be able to set a plug
15 because we just don't know.

16 Q Okay. Isn't the packer below the
17 SSSV, or subsurface safety valve, in
18 Well SS-25?

19 A The packer is below it, yes.

20 Q So he says in the e-mail, "We are
21 not certain Wireline it is possible to set a
22 stable plug below the empty Camco safety
23 nipple"; correct?

24 A Yeah, that's what he says in his
25 e-mail.

26 Q Okay. Just to further clarify the
27 general explanation of the Camco safety
28 nipple here, that's part of the subsurface

1 safety valve; correct?

2 A Yeah, that's my understanding, but,
3 you know, Dan Neville is really the expert
4 with regard to wellbore diagrams so --

5 Q Understood. Thank you,
6 Mr. Schwecke. And at the end of the sentence
7 in parentheses, he refers to "communication
8 port between casing and tubing below the
9 packer."

10 Do you see that?

11 A I see that statement.

12 Q Why is the communication port below
13 the packer significant in trying to put a
14 plug below the Camco safety nipple?

15 A Mr. Neville would probably be able
16 to address it, but I don't believe the
17 communication port was below the packer. In
18 order for it to work as a communication
19 between the tubing and the annulus, it would
20 have to be above the packer.

21 Q Understood. Thank you,
22 Mr. Schwecke.

23 Your Honor, that's the extent of
24 this line of cross-examination. We still
25 have our foundation concern and the concern
26 about this exhibit going in the record, but I
27 would note that we think this e-mail shows an
28 inconsistency between what Mr. Neville

1 testified to and what's shown here, and so
2 the record should show that. We think we've
3 adequately laid this. This is -- we received
4 this as part of Data Request-33 from
5 SoCalGas.

6 I don't know what else we have to
7 do in order to get this exhibit into the
8 record, but I'm concerned that we're going to
9 move it in and SoCalGas will object on
10 grounds such as laying foundation at this
11 point.]

12 ALJ POIRIER: Mr. Gruen, I think it's
13 premature to have this discussion now. Your
14 concerns are noted for the record. I'll let
15 Ms. Patel have a word, but we won't be moving
16 this exhibit until later.

17 MS. PATEL: All right. Your Honor, the
18 only thing I was going to say at this time is
19 that I don't know why we are having this
20 discussion right now.

21 ALJ POIRIER: Mr. Gruen, why don't you
22 go ahead and move on to your next line.

23 MR. GRUEN: Understood, your Honor. I
24 will.

25 Q Mr. Schwecke, I want to ask you
26 general questions about the well-kill
27 operations meetings as you understood them
28 and as you participated in them.

1 So can you describe at a high
2 level, general level, the meetings that
3 SoCalGas had related to well-kill operations?

4 A Well, that's a very broad question
5 because we had a variety of meetings, which
6 included get-togethers where -- we had with
7 Boots & Coots, Bret Lane, myself, and others,
8 and talk about the well-kill plans going
9 forward, and we had those on a continuous
10 basis because the situation was
11 ever-changing, and if something had changed
12 from the time of the last discussion -- the
13 last one, so those were current, really, on a
14 day-to-day basis.

15 And we also had our morning
16 meetings -- and you can call them safety
17 meetings or operation meetings -- where we
18 had not only ourselves, but the agencies, the
19 CPUC, DOGGR, in a later day, it was the fire
20 department where we would go over well-kill
21 plans, go over the operations for the day.

22 So there's a lot of different
23 meetings occurring; so to say it was just one
24 particular one, you'd have to be a little
25 more specific.

26 Q Perhaps, I misstated the question.
27 I did mean to ask meetings in the plural
28 form, not just one. So you've answered the

1 question. Thank you, Mr. Schwecke.

2 Was Boots & Coots present at any of
3 these meetings?

4 A Boots & Coots was present at all
5 those meetings.

6 Q Was anyone keeping notes of these
7 meetings?

8 A I believe when we had meetings that
9 were specific, that we arranged with DOGGR,
10 as a separate briefing for DOGGR, which
11 included Boots & Coots, included occasionally
12 CPUC, SED. It included some of the other
13 agencies. Those were documented and meeting
14 notes were prepared and drafted.

15 Q Okay.

16 A And, I think, when you look at some
17 of the other conversations, they were more
18 verbal in nature and not necessarily
19 documented because they were just general
20 discussion that would occur continuously
21 throughout the day on the situation and what
22 the thoughts were on the next day because,
23 again, things were changing day to day,
24 especially after a well kill, things changed
25 dramatically, and you had to assess it.

26 And what we could do to further
27 assess it everyday was part of the
28 discussion: How do we get more information?

1 Because we didn't know everything because,
2 again, it was below surface. We really
3 couldn't tell what was happening --

4 Q So I'm understanding from part of
5 your answer that there were some meetings
6 that excluded agencies related to well-kill
7 operations, but included SoCalGas personnel
8 and Boots & Coots personnel.

9 Did I understand that correctly?

10 A I wouldn't put it that way. Those
11 were impromptu meetings. I mean, they were
12 discussions. We sat in the same trailer
13 together first starting on SS-9, which was
14 probably, you know, 100 feet below the leak
15 of the well.

16 So we were in those trailers on a
17 continuous basis and conversations were
18 occurring all the time. So it wasn't a
19 formal meeting, but those discussions were
20 occurring at all times.

21 Q Okay. Understood. I appreciate
22 the clarification.

23 And the impromptu meetings or
24 discussions between SoCalGas and Boots &
25 Coots were maybe more broadly the impromptu
26 meetings that excluded agencies. Regarding
27 those, were there notes kept of any of those?

28 A You know, Mr. Gruen, I get

1 concerned when you say "excluded" because
2 that means purposely. I mean, they were just
3 discussions. If we were having that
4 discussion on the SS-25 well pad, they were
5 not found. They weren't on the site at a
6 given time. We had those discussions as
7 we're looking at the well, but those
8 impromptu discussions, we didn't include and
9 see the need to have written documentation of
10 those meetings because ultimately what came
11 out of those meetings was the kill plan that
12 was going to be used for the next kill
13 attempt or what the next operational steps
14 were going to be performed the next day.

15 MR. GRUEN: Okay. Let's pull up
16 Exhibit SED-218.

17 Your Honor, at this point, I might
18 just flag for everyone -- given the cadence
19 of this, we may go a little bit shorter in
20 our cross than we initially anticipated; so,
21 you know, plus or minus, we may be an hour
22 out, perhaps, we'll go to lunch, depending,
23 but I did want to flag that for everyone.

24 ALJ POIRIER: Thank you, Mr. Gruen.
25 Just keep us posted. Again, we'll try to
26 break about the hour mark. So let me know if
27 you hit a point where it's a natural place to
28 break.

1 MR. GRUEN: Understood. Thank you,
2 your Honor.

3 Q So we have Exhibit 218 in front of
4 us, and if we go to the bottom just for
5 purposes of reading the Bates stamp:
6 AC_CPUC_SED_DR_16_0023727, and if you scroll
7 to the top of the e-mail.

8 Mr. Schwecke, are you familiar with
9 this document?

10 A Yes, I am.

11 Q Thank you.

12 And this is an e-mail from Jim
13 LaGrone to Hilary Petrizzo, dated December
14 27, 2015 at 4:07 p.m., cc-ing a number of
15 individuals from Boots & Coots, I believe,
16 including Arash Haghshenas. Does this
17 comport with your understanding?

18 A Yes. There were individuals from
19 Boots & Coots and Halliburton, along with
20 Hilary on the e-mail.

21 Q If you go to the first page of this
22 document -- your Honor, can we go off record
23 for a moment.

24 ALJ POIRIER: Off record.

25 (Off the record.)

26 ALJ POIRIER: Back on the record.

27 Please, go ahead.

28 MR. GRUEN: Yes. Thank you, your

1 Honor.

2 Q So here it says, "Arash" -- if you
3 look where the curser is, just from the third
4 line from the bottom, it shows:

5 Arash modeled a large casing
6 section to simulate two large
7 voids, and they showed a good
8 correlation to what was taking
9 place on the last few kill jobs.

10 Do you see that?

11 A I see that statement.

12 Q And so that's referring to modeling
13 that occurred in preparation for the relief
14 well; correct?

15 A Yeah. The discussion here was
16 focused on a situation that could occur that
17 had to be addressed during the drilling of
18 the relief well.

19 Q Thank you.

20 Okay. Let's go to the next
21 exhibit. Bear with me a second.

22 ALJ POIRIER: Off the record.

23 (Off the record.)

24 ALJ POIRIER: Back on the record.

25 We're going to take five-minute break until
26 10:30. Thank you. Off the record.

27 (Recess taken.)

28 ALJ POIRIER: We'll be back on the

1 record, returning from a short break.

2 Please continue, Mr. Gruen.

3 MR. GRUEN: Thank you.

4 Q I'd like to introduce Exhibit
5 SED-313. If we could go to the Bates number
6 at the bottom, the Bates number on the first
7 page of the exhibit,

8 AC_CPUC_SED_DR_16_0020036.

9 And if we scroll back to the top of
10 this first page, I will ask you,
11 Mr. Schwecke, just to lay foundation, this is
12 an e-mail dated February 6, 2016, shown at
13 the top; do you see that?

14 A Yeah, I see that. Yes.

15 Q Okay. And it's from Bret Lane to a
16 number of individuals from Boots & Coots, and
17 it includes yourself and Todd Van de Putte;
18 is that correct?

19 A That is correct.

20 Q And are you familiar with this
21 document, Mr. Schwecke?

22 A Generally, yes.

23 Q Okay. Thank you.

24 And the subject line shown there is
25 potential communication between P-39A and
26 SS-25 through WSO; correct?

27 A That's the subject line, yes.

28 Q Okay. And P-39A, I think we've

1 covered this, but just to be sure, that's the
2 relief well that was used to successfully
3 kill the target well, Well SS-25; correct?

4 A That is correct.

5 Q "WSO" in the subject line refers to
6 Water Shutoff Operations?

7 A I believe so.

8 Q And Bret Lane forwarded an e-mail,
9 as shown below, to Morten Haug Emilsen;
10 correct?

11 A Yes. That was attached to Bret's
12 e-mail.

13 Q Okay. And that's from also the
14 same day, February 6, 2016?

15 A Yeah. Looks like a couple minutes
16 after Bret forwarded it.

17 Q And just for the record,
18 Mr. Emilsen is author of the February 16,
19 2016, Dynamic Solutions Report; correct?

20 A Yeah. I believe that's the name of
21 the report. I would refer to it as the Add
22 Energy Report.

23 Q Okay. Very good.

24 And on the page here if we scroll
25 down -- Yeah. That's good. On the same page
26 that we've been looking at, the February 6
27 e-mail from Morten Haug and Emilsen that we
28 just noted, it says here in the second

1 paragraph, second sentence towards the end
2 starting -- I'm sorry. Second line of the
3 second paragraph, starting at the end, it
4 says:

5 Even if we lose mud though only
6 one of the WSO perforations, the
7 resulting rate is sufficient to
8 kill the well.

9 Did I read that correctly?

10 A Yes. You read that correctly.

11 Q Okay. If we look at another
12 exhibit, if we go to Exhibit SED-314, and if
13 we go to the Bates number at the bottom of
14 the first page here. So the Bates number is
15 shown as JM0005, and if we scroll up to the
16 top, for purposes of laying foundation, this
17 is an e-mail from James Mansdorfer to
18 Mr. Lane, Mr. Rick Phillips, to yourself, and
19 Mr. Jimmie Cho, all at SoCalGas; is that
20 correct?]

21 A That is correct.

22 Q Okay. And, Mr. Schwecke, are you
23 familiar with this document?

24 A Yes. I have seen this document.

25 Q Okay. And this is dated
26 November 20, 2015, correct?

27 A That is the date on the document,
28 yes.

1 Q All right. And you can review it,
2 if you like, but just for the record, the
3 Bates numbers of the entire document are
4 JM0005 through JM0007, just noting the Bates
5 numbers. And we can scroll through for the
6 screen shares just to identify them. That's
7 05, that's 07, and there's 06. So that's
8 just the entirety of the document.

9 If we go back to the first page, in
10 the body of the e-mail, it starts at the
11 first paragraph, it says:

12 I was responsible for the storage
13 wells for over 20 years and always
14 was aware that a subsurface leak
15 could occur and have previously --
16 says in parenthesis -- and so have
17 given it a lot of thought and
18 studied all papers and published
19 accounts of subsurface blowouts
20 that I could find. I have offered
21 my assistance to Scott Ferguson
22 and Phil Baker to help solve this
23 problem starting at Lee's house on
24 that first Saturday, but they have
25 not shown any interest.

26 Do you see that?

27 A I see where Jim says that.

28 Q Okay. Turning to the last page

1 JM0007, if we go to the last -- there's the
2 Bates number. And if we go to the last
3 paragraph, he says:

4 I would be happy to discuss these
5 recommendations and participate in
6 solving the problem if it is
7 desired by the company.

8 Correct?

9 A That's what the e-mail says.

10 Q Mr. Schwecke, to your knowledge,
11 did SoCalGas reach out to Mr. Mansdorfer to
12 discuss his observations for recommendations
13 related to this e-mail?

14 A Yes, we had conversations with
15 Mr. Mansdorfer.

16 Q At approximately what point in
17 time?

18 A I can't recall, but it was probably
19 after this e-mail. At least from my
20 participation, he clearly said he had a
21 conversation with Scott Ferguson and Phil
22 Baker before that, so we had conversation
23 with Jim after this e-mail was sent.

24 Q Do you know if it was before or
25 after the top kills were completed -- the top
26 kill attempts were completed?

27 A I do not know specifically when the
28 exact date was.

1 Q Okay. Let's go to another exhibit,
2 Exhibit SED-315. And this exhibit, if we go
3 to the Bates number again, this exhibit, the
4 Bates number at the bottom, the data request
5 one that we have been using is
6 AC_CPUC_SED_DR_27_0003219. And if we scroll
7 down just to establish all the Bates number,
8 it continues with the same prefix and ends in
9 3220, and the last page of this three-page
10 document continues with same prefix ending in
11 3221.

12 And if we scroll to the top of this
13 again, this is an -- I will ask you: This is
14 an e-mail, again, from Mr. Mansdorfer to
15 yourself to -- and cc'ing Mr. Todd
16 Van de Putte, dated -- this one is dated
17 January 23rd, 2013. Do you see that?

18 A Yeah. Yes. That is correct. That
19 was the period of time in which Jim worked
20 for me in storage.

21 Q And are you familiar with this
22 e-mail?

23 A Yes, I have reviewed the e-mails.

24 Q Okay. If we go to the last page,
25 since this is I believe an e-mail thread and
26 it's in therefore reverse chronological
27 order, on the page with Bates number ending
28 3221, at the top, it appears you say there:

1 We need to talk about GRA and what
2 well integrity plans, if any, is
3 planned for this year. There
4 appears to be some additional
5 capital, and Bret thought we might
6 be able to use it for moving
7 forward on our integrity plans.

8 Do you see that?

9 A I see that statement, yes.

10 Q And if we scroll up, continuing
11 showing the response. So now we are at the
12 page ending with Bates stamp 3220. It shows
13 that statement was part of an e-mail from you
14 to Jim Mansdorfer, dated January 22, 2013,
15 correct?

16 A That is correct.

17 Q Okay. And continuing up on this
18 page, we see that Mr. Mansdorfer responded
19 via e-mail to you on January 23, 2013. Do
20 you see that?

21 A Yes, I do.

22 Q And in that e-mail, Mr. Mansdorfer
23 says in the second paragraph, starting on the
24 first line toward the end:

25 We are talking about the program
26 to go through all storage wells
27 and run casing inspection log and
28 pressure test casing, refresh

1 wellhead seals and valves and at
2 Aliso run a deep set SSSV.

3 Do you see that?

4 A Yeah, I see that statement.

5 Q And scrolling up to the next page,
6 we go to Bates number ending in 3219, and we
7 see on January 23rd, 2013, then you respond
8 here on this page to Mr. Mansdorfer; is that
9 correct?

10 A Yes. This is my response to Jim's
11 comments on his ability to perform additional
12 work, on the prior e-mail --

13 (Crosstalk.)

14 Q Yes.

15 A -- what can be done.

16 Q Yes. Understood. And you say,
17 first paragraph, last sentence, "What amount
18 of annual commitment do you think we would
19 need?" Do you see that?

20 A That's what the e-mail says.

21 Q Continuing up on this page, we see
22 Mr. Mansdorfer responds to you again via
23 e-mail on January 23rd, 2013, correct?

24 A Yes. This is Jim's response to my
25 e-mail.

26 Q And on the second line, he says,
27 "We are not installing deep set SSSVs at
28 Aliso, but that is something we need to start

1 doing research on." Do you see that?

2 A Yeah. He says that and he follows
3 up in the next sentence saying that, "We've
4 had bad luck on the SSSV that was installed
5 in Goleta and thereby causing us to wonder
6 about the reliability of those valves."

7 Q So, in other words, he's trying to
8 recommend to you that SSSVs be installed at
9 Aliso, but that there are issues with doing
10 that. Would that be another fair way to
11 characterize it?

12 A No. I wouldn't say it that way.
13 Part of the suggestion was that could we look
14 at SSSVs, but because we are having the
15 reliability concerns, I would -- in
16 discussing with Jim, he was not recommending
17 that we install them because we have
18 reliability concerns.

19 Q Okay. Let's turn to another
20 exhibit, Exhibit SED-316. And if we -- let's
21 go to the Bates number first, if we can, at
22 the bottom. This is Bates number
23 SED-316.001, and if we go to the top of the
24 document, Mr. Schwecke, are you familiar with
25 this document as a SoCalGas Response to
26 SED-Data Request 27?

27 A Yes. I have looked at this
28 document.

1 Q Okay. And turning to the page with
2 the Bates stamp SED-316.012, which is the
3 next page, this is -- there's 316.012, we see
4 Question 36H, which asks:

5 We'd asked SoCalGas to provide
6 information about the subsurface
7 safety valves at SoCalGas storage
8 facilities.

9 Correct?

10 A Yes. That's what the question
11 talks about.

12 Q Okay. And then SoCalGas responds
13 to Question H, as well as B through H, says
14 toward the -- I'm looking the 5th line down.
15 It starts in the middle of the page after the
16 Bates number there.

17 In addition, SoCalGas previously
18 provided the CPUC with a copy of a
19 data request response to DOGGR.
20 That data request response
21 included a narrative regarding
22 SoCalGas' experience with deep set
23 SSSVs at SoCalGas storage fields
24 in correspondence that SoCalGas
25 had in its records regarding
26 SSSVs. Please see electronic
27 documents with Bates range.

28 And it provides a range there.

1 AC_CPUC_SED_DR_27_0000431 to same prefix
2 ending in 3343. Do you see that?

3 A I see that.

4 Q Let's introduce Exhibit SED-317.
5 And if we go to the Bates page, the Bates
6 number here, AC_CPUC_SED_DR_27_0003207 and
7 this continues on to the Bates number at the
8 bottom, same prefix, but ending in 3208. I
9 am going back to the first page then.

10 And I'll ask you with that
11 background, Mr. Schwecke, are you familiar
12 with this document?

13 A Yes. I have looked at this
14 document.

15 Q Okay. And this is a document from
16 Mr. Mansdorfer -- Jim Mansdorfer, just for
17 the record, M-a-n-s-d-o-r-f-e-r, to Rudy
18 Weibel, W-e-i-b-e-l. Do you see that?

19 A Yes, I do.

20 Q Dated April 23rd, 2009, correct?

21 A That's the date of the e-mail.

22 Q Okay. Do you know who Rudy Weibel
23 is?

24 A Yes, I do. He was the --

25 Q Go ahead. I am sorry.

26 A He was the Director of Storage
27 Operations prior to myself taking on that
28 role in 2011.

1 Q Understood. Okay. Let's turn to
2 the 5th paragraph of this page starting at
3 the first line where it says a little bit
4 into the first line, it says:

5 I recommend that we put together a
6 case for a program to install deep
7 set safety valves in all Aliso
8 Canyon wells. We would pull
9 tubing, run a casing inspection
10 log, pressure test the casing and
11 rebuild the wellhead seals prior
12 to running -- excuse me -- prior
13 to running -- excuse me -- prior
14 to re-running tubing with the
15 safety valve.

16 Do you see that?

17 A Yes, I see that statement.

18 Q Okay. And if we go to the third
19 paragraph scrolling slightly up,
20 Mr. Mansdorfer advises here starting at the
21 beginning:

22 Casing corrosion, landslide
23 movement or fault movement are all
24 potential causes of a major
25 subsurface casing leak. Depending
26 on the cause and the number of
27 wells affected, it may be possible
28 to control the well by pumping

1 kill fluid into it, but if a
2 subsurface blowout gets out of
3 control and craters to the
4 surface, it would probably require
5 a relief well to control it. Even
6 one of those happening could have
7 severe consequences for the
8 company's imagine.

9 Do you see that?

10 A Yeah, I see that, and, you know, my
11 belief is Jim's really concerned about the
12 geological issues on the fault movement. My
13 conversations with Jim has been around that
14 and that's been his primary concern from the
15 time he started working for me in 2011, up
16 until more recent conversations.

17 Q Understood.

18 Your Honor, at this time SED has no
19 further questions on cross-examination for
20 Mr. Schwecke.

21 Mr. Schwecke, thank you very much.]

22 ALJ POIRIER: Okay. Let's go off the
23 record.

24 (Off the record.)

25 ALJ HECHT: We'll be back on the
26 record. We'll be taking a 15-minute break
27 until 11:05. At that point Cal Advocates
28 will begin with its cross-examination of

1 Mr. Schwecke. Thank you. We'll be off the
2 record.

3 (Off the record.)

4 ALJ POIRIER: We will be on the record
5 returning from a morning break. We are now
6 starting with the cross-examination of
7 Mr. Schwecke by Cal Advocates.

8 Ms. Bone, please go ahead.

9 CROSS-EXAMINATION

10 BY MS. BONE:

11 Q Good afternoon, Mr. Schwecke. How
12 are you doing?

13 A Good morning. I'm doing fine,
14 thank you.

15 Q I hope that we'll get through this
16 pretty quickly and you'll be done today.

17 A That would be great.

18 Q We've just put up Exhibit SED-323.
19 That is that October 24, 2015, e-mail from
20 Tom Egbert to Todd Van de Putte. Do you
21 recall seeing that e-mail this morning?

22 A Yes, I do.

23 Q Did you review that e-mail before
24 Mr. Gruen cross-examined you?

25 A Yes, I did.

26 Q Do you know Mr. Egbert?

27 A Yes, I know Tom.

28 Q And does he still work for

1 SoCalGas?

2 A Yes, he does.

3 Q Was he working on the well-kill
4 efforts for SS-25?

5 A Tom was one of the storage
6 engineers at Aliso Canyon, so when the leak
7 was discovered, he basically participated in
8 the initial well-kill operation.

9 Q So you mentioned that he was
10 involved in the initial well-kill operation.
11 Was he involved in later well-kill
12 operations?

13 A Tom was a source of information
14 with regard to the well, the field, and what
15 history we had with respect to the
16 information on operation, not only SS-25, but
17 the entire field. So Tom was a resource that
18 was used.

19 Q Do you have any idea how long Tom
20 has worked for SoCalGas?

21 A I do not know.

22 Q Is it more than 10 years?

23 A I would think it's probably at
24 least more than 10 years, but again, I do not
25 know specifically.

26 Q You said that you relied on him for
27 information about the Aliso Canyon facility
28 as well as Well SS-25; is that correct?

1 A Yeah, the storage field. Tom's
2 role was, as we would go on injection and
3 withdrawal, identifying which wells that
4 would be on injection and which wells would
5 be on withdrawal managing the work such as
6 Wireline activity on temperature surveys.

7 So Tom was very familiar with the
8 wells and the work on the wells. He was less
9 familiar with the surface activity as far as
10 the plants, on the compressors, on the
11 dehyds, and well equipment. It was about the
12 wells themselves.

13 Q Do you consider Tom to be a good
14 engineer whose advice is reliable?

15 A I consider Tom to be a good
16 engineer.

17 Q The e-mail stated, "We plan to
18 remotely kill the well without setting a
19 plug"; is that correct?

20 A That's what the e-mail says.

21 Q Did SoCalGas attempt to kill the
22 well without setting a safety plug?

23 A Yes, I think we've all seen that
24 the first well-kill operation was to pump
25 fluids without setting a Wireline plug or
26 attempting to set a Wireline plug. We
27 also -- this says "remotely." Ultimately we
28 connected directly to the wellhead and did

1 not use the remote kill piping that was
2 available because it was not needed and
3 connecting directly to the wellhead is a much
4 better situation when you're attempting to
5 kill a well.

6 Q How many people at Boots & Coots
7 were working on the well-kill efforts?

8 A Maybe you can give me a time frame?

9 Q Did it vary over time?

10 A Yes, it did. Initially there was
11 three, then very quickly there was four
12 individuals. And then you had others that
13 basically showed up that included Jim LaGrone
14 and Rolly Gomez, so it changed. And then as
15 we got into the relief well, additional
16 Halliburton and Boots & Coots people showed
17 up.

18 Q So by the time that Boots & Coots
19 were modeling the well-kill efforts, how many
20 people were on-site at SoCalGas?

21 A I believe at the time that, as you
22 mentioned modeling, I think -- which I think,
23 you know, the definition of modeling -- but
24 there was four individuals of Boots & Coots
25 that were on-site at the time.

26 Q And how many were in Texas?

27 A I do not know how many employees
28 that are with Boots & Coots that are located

1 in Texas.

2 Q And I believe you testified that
3 you reviewed the results of Boots & Coots'
4 transient models; is that correct?

5 A Yeah. The results for the
6 transient model were the well-kill plans that
7 were developed. We would basically have
8 discussions as a group of those well-kill
9 plans, not only to review the plan and any
10 concerns we have about what effects it might
11 have, but then also preparing for it to
12 execute a plan in obtaining equipment and
13 materials based on what the well-kill plan
14 said, which is the output of the modeling and
15 work that was done by Boots & Coots.

16 Q And during those discussions, were
17 Boots & Coots employees from Texas included
18 in those discussions?

19 A Those discussions, at least the
20 original -- the initial ones, were basically
21 with the people that were on-site so that we
22 did not have a communication. I mean all the
23 Boots & Coots employees were originally from
24 Texas, but I think -- it was primarily the
25 people who were on-site and that's where you
26 had additional resources come in later on.
27 They would participate in those discussions
28 as well.

1 Q I'm confused because I got the
2 impression from your testimony yesterday that
3 in fact you had also been communicating with
4 Boots & Coots' people in Texas.

5 Is that not accurate?

6 A I think what I've testified -- and,
7 if not, let me clarify -- that the
8 Boots & Coots people that were on-site were
9 communicating with Houston. Those people
10 didn't participate in the conversations that
11 we were having throughout the day, throughout
12 the period with the on-site Boots & Coots
13 individuals.

14 I mean it was very difficult
15 because the remote location to have a
16 conference call was very difficult. So from
17 that standpoint, that's what I meant by
18 conversations with Houston.

19 Q So then as I understand it, the
20 Boots & Coots on-site personnel at the Aliso
21 Canyon facility were having separate
22 conversations with the Boots & Coots people
23 in Texas; is that correct?

24 A Yeah, that's our expectation. When
25 you look at Boots & Coots, not only do you
26 have the individuals that come on-site, but
27 you have the whole Boots & Coots, in this
28 case Halliburton who they're a subsidiary, in

1 Houston that are resources that are drawn
2 upon by those well-control experts that are
3 on-site.

4 Q And when you say "on-site," what
5 does that mean? Was there one or two or
6 three trailers that everybody was working
7 from?

8 A So let me kind of give you a
9 picture of the site. You had the SS-25 well
10 pad, which had two additional wells. Just
11 below that on what is the SS -- Standard
12 Sesnon 9 well pad, probably about a hundred
13 to 150 feet away from the well was another
14 pad in which we brought in trailers to use as
15 offices, use as meeting rooms that we could
16 have those conversations and still at that
17 point, if we wanted to, walk up the hill to
18 get to the SS-25.

19 We didn't want to be specifically
20 on the site because if something was to
21 happen, we wanted to be sufficient distance
22 away. So those trailers were brought in to
23 create that shelter because, again, you had a
24 lot of weather issues on wind and rain and
25 cold that we basically had those trailers
26 brought in for that purpose.

27 Q And who were the primary people
28 working in those trailers on a regular basis?

1 A Primarily it was the SoCalGas
2 employees such as Bret Lane, myself, a few
3 others, and then the Boots & Coots
4 individuals that were on-site. It was
5 dedicated for them, but we would have
6 visitors on a regular basis.

7 Q And were you at the well-kill site
8 in these trailers on a daily basis?

9 A I was at -- once I was brought up
10 as the deputy operations chief, I was there
11 approximately about 90 days during the
12 111-day leak. So I was on those locations,
13 on those sites every day.

14 I was -- one of the roles I had was
15 that as DOGGR personnel or CPUC personnel,
16 who typically came on the site on a daily
17 basis, was to take them and escort them as
18 they would go up and walk up to actually view
19 the SS-25 leak because they were looking at
20 it from a visual perspective preparing their
21 daily reports that would report to DOGGR, you
22 know, who is the primary regulator for
23 underground storage activities, communicate
24 to the Sacramento office, which I think in
25 turn was communicated to the governor's
26 office.

27 Q And how often was Mr. Walzel there?

28 A He was there every day that he was

1 there, and I think that lasted from the time
2 they arrived on October 25th, I believe,
3 until he left sometime in December.

4 Q So he left before the well-kill
5 efforts were successful; is that correct?

6 A He left before the relief well. He
7 had less role in the relief well. Those were
8 some of the other individuals from Boots &
9 Coots of Halliburton that came on-site that
10 specialized in relief wells like John
11 Hatteberg, the Sperry individual, Jim
12 LaGrone, Rolly Gomez.

13 Those were the individuals that
14 were focused on it, and as we got closer and
15 closer to the intercept, less requirements.
16 And they basically -- just like you do with
17 any other incident, you have to replace your
18 people with new, fresh people because after a
19 period of time, you become -- you're
20 concerned about fatigue. So that was the
21 time that Danny Walzel could go home.

22 Q I believe you testified that you
23 reviewed the results of the Boots & Coots
24 transient models; is that correct?

25 A I think what I talked about was the
26 results that came out, which were the
27 well-kill plans.

28 Q So how would you be informed of

1 those results? For example, did you get them
2 in a hard copy, a paper, or did you get an
3 e-mail or something else?

4 A Typically it was presented during a
5 meeting, which was a hard copy of what the
6 printout would be of the well-kill plan. We
7 would walk through step-by-step of what each
8 of those are, check off which materials we
9 needed, which equipment we needed, a timing
10 in which it would occur.

11 I mean when you talk about
12 materials, you're talking about kill fluids
13 and how much kill fluids do you expect, need,
14 what is expected pump rates. So that was the
15 discussion that took place during primarily
16 hard copies as we walked through them. And
17 then if any adjustments were made, then we'd
18 get a second version as we went through it.

19 Q When did you become aware that
20 Boots & Coots was actually doing transient
21 modeling for the well-kill efforts?

22 A Actual transient models? I think
23 it was probably -- when I became officially
24 aware of it was when Danny Walzel in his
25 deposition defined a transient model.

26 We had always assumed that as a
27 well-control expert, Boots & Coots was doing
28 what they would typically do. They would

1 basically model kill jobs, calculate fluid
2 densities, calculate fluid rates and pump
3 rates. And that's what they were doing at
4 all times in development of the kill plans.
5 But the term "transient model" really came up
6 for Boots & Coots when Danny Walzel testified
7 in his deposition.

8 Q So you were aware that Mr. Walzel's
9 laptop was stolen; is that correct?

10 A Yes, I found that out.

11 Q And do you know where the theft
12 occurred?

13 A I can't recall specifically but it
14 was in Texas, I believe.

15 Q You testified, I think, that
16 Mr. Walzel and other Boots & Coots staff were
17 communicating with Boots & Coots' Texas
18 offices; is that correct?

19 A That's my understanding.

20 Q And was Mr. Walzel's deposition
21 after the last top-kill effort?

22 A Yes, I believe so.

23 Q And did you understand that
24 Mr. Walzel was running the modeling on his
25 own laptop?

26 A You know, during the period of time
27 when we talked about those trailers,
28 Ms. Bone, Danny would basically go into the

1 trailer to perform his analysis and we knew
2 he was working through it. The assumption
3 you can only make is that he was using his
4 laptop. You know, everyone had those
5 technical devices that they would use. And
6 to run any modeling, you'd typically use some
7 type of computing device.

8 Q Would you have expected anyone else
9 at Boots & Coots to be assisting Mr. Walzel
10 with the modeling?

11 A Boots & Coots was a well-renowned
12 well-control expert. I would expect them to
13 do what they do. If their process is to have
14 Danny, who was the defined engineer on the
15 project -- because they had the defined
16 engineer, they had a safety expert, they had
17 another -- a well-control specialist, then
18 they had their senior control well
19 specialist. They all took roles in that. It
20 would not -- it does not surprise me that
21 Danny, as the engineer on the site, was the
22 one responsible for running any modeling that
23 was done.

24 Q So it would make sense to you that
25 he was not coordinating with anybody else at
26 Boots & Coots on this modeling?

27 A Well, when you say coordinating, I
28 think he was, you know, doing the

1 calculations, but I think when you're looking
2 at -- obviously when he'd take it and he'd
3 share it with the organization what was
4 coming up and give thoughts on it just like
5 he did with us and then go back, was his
6 assumptions correct? You know, was he
7 assuming the right reservoir pressure? Was
8 he assuming X, Y, or Z? Those assumptions
9 are critical in any modeling.

10 So he would share that with
11 everyone that had any visual representations
12 of the well and what was occurring and what
13 information they had. So collaborating was
14 occurring, you know, throughout the process.

15 Q So then as I understand it, the
16 results of the modeling that you would see
17 would also identify the assumptions that
18 Mr. Walzel relied upon?

19 A Well, I talked about the well kill,
20 but I think, you know, part of the discussion
21 up front is not the results of the model but,
22 you know, what are the assumptions that are
23 going in? You know, what is the reservoir
24 pressure? I mean the well configuration
25 didn't change dramatically unless we found
26 some additional information that gave us an
27 idea where the hole -- I mean it was a
28 dynamic situation.

1 We didn't know where the hole was.
2 We didn't know that the casing was parted or
3 not, whether it was split or not. We didn't
4 know the flow path. So as you develop these,
5 each time you build on a prior well kill,
6 then you had additional information you had
7 to use and Danny would use that information.
8 That was observed by all the individuals who
9 were there.

10 Q So I take it that you understand
11 that having accurate assumptions in order to
12 do the modeling is important?

13 A Well, you rely on the information
14 that you have on the time. And whether it's
15 accurate or not, you have to assume that's
16 what the information is, but accuracy was
17 very difficult. One, I mean, the well -- you
18 could not see the leak, right, so you can't
19 really describe the leak. You're going by
20 what other information -- you can't tell how
21 much gas is actually coming out of the
22 ground, so you have to make assumptions.

23 In any modeling you have to make
24 assumptions because if you knew the perfect
25 scenario, you know -- for example, you know,
26 with the root cause analysis, they had all
27 the information because they were able to
28 pull the well out of the ground so you have

1 to use assumptions. The accuracy of those
2 assumptions are based on your best available
3 information you have when you make them.

4 Q Mr. Schwecke, you still haven't
5 answered my question, which is did you review
6 those assumptions when you were sitting down
7 with everybody to discuss the well-kill
8 efforts?

9 A Yeah, I think we had -- we had
10 discussions with regard to what the
11 assumptions were during the review. I think
12 what you asked is did the output show the
13 assumptions. I can't recall if they actually
14 showed them, but we would have discussions
15 that we're assuming a well pressure of this,
16 we're assuming this, we're assuming that. So
17 it was part of the discussion.

18 Q So it was part of the discussion,
19 but nobody actually saw the modeling that
20 showed exactly which assumptions were being
21 used?

22 A I can only speak for myself. I
23 don't know if other Boots & Coots individuals
24 saw the modeling and the assumptions that
25 were put in. I can only speak for what I
26 saw.

27 Q Wouldn't you expect Boots & Coots
28 to have someone other than Mr. Walzel

1 involved in assuring that the assumptions
2 were being run appropriately?

3 A And I expect they did. I mean
4 Boots & Coots being the world-renown
5 well-kill expert and in also what I believe
6 was conversations with Houston, you know, the
7 senior control well specialist, I'm sure was
8 aware of what the assumptions that Danny was
9 using in his modeling effort.

10 Q And how would those assumptions
11 have been communicated to Boots & Coots?

12 A Because Boots & Coots was on-site
13 taking reads and taking information
14 themselves. They went through the process of
15 diagnostics the day they got there until the
16 day they left. They would basically, you
17 know, take pressure reads, they -- their
18 observations, they'd look at the well files.
19 They were basically looking at all the
20 information the same time we were.

21 Q Yet as I understand it, when
22 Mr. Walzel's laptop was lost, there's no
23 other evidence of the modeling that was run,
24 and apparently nothing is at Boots & Coots'
25 facility to show us what functions were used.

26 Am I misunderstanding that?

27 A Well, again, I don't know what
28 Boots & Coots', you know, policies are but,

1 you know, if the information is being run on
2 a laptop and stored on the laptop and that
3 laptop is stolen, that's, you know, what
4 happened and what occurred.

5 Q But for Mr. Walzel to share his
6 functions and his modeling with people at
7 Boots & Coots, wouldn't he have had to send
8 it to a mainframe or the cloud or in an
9 e-mail to someone else at Boots & Coots? How
10 would they be able to look at his work?

11 A Well, I think they'd do it
12 through -- via hard copy or verbal
13 discussion. Because they were right on-site,
14 it's a lot easier. And I think this last
15 year and a half with regard to the
16 pandemic and so on, sometimes it's a lot
17 easier to have that face-to-face conversation
18 and talk about those things and not
19 necessarily e-mail it to someone that may not
20 be checking their e-mail because they may be
21 standing next to a leaking well.

22 Q Right, but then there would be hard
23 copies that we'd be able to look at that
24 would show the modeling and would show the
25 assumptions, yet we haven't seen any of those
26 either.

27 A Not necessarily, because it could
28 have just been verbal conversations.

1 Q I see. So which SoCalGas staff
2 would have provided information regarding the
3 appropriate assumptions to Mr. Walzel?

4 A Well, ultimately with regard to the
5 incident command structure, it was Bret Lane
6 would approve the well kill, which also would
7 approve the assumptions that were used.

8 Q So would you expect that Mr. Lane
9 would have hard copies or some information
10 that actually listed what assumptions were
11 being used as part of the modeling?

12 A I would expect Mr. Lane to
13 basically have those verbal conversations
14 with Boots & Coots on what assumptions they
15 were going to use, on what assumptions they
16 used during the modeling effort. Again, we
17 all had the same data whether it was the
18 pressure data of the well, the reservoir
19 pressure.

20 So we'd all have those assumptions
21 so I don't necessarily know whether he would
22 have a hard copy, but my expectation is the
23 conversations and that tied directly into the
24 conversation we had with the well-kill plans
25 and what came out of the model.

26 Q Thank you, Mr. Schwecke.

27 I have no further questions.

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

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

(Off the record.)

ALJ POIRIER: We'll be back on the record. We are going to take a break at this time. We will take a break until 12:50. We will return and start with the redirect of Mr. Schwecke by SoCalGas.

While off the record, I also indicated that we will not be allowing the use of demonstrative exhibits during the redirect. With that, we will be off the record.

(Off the record.)

ALJ POIRIER: Let's go quickly back on the record and just confirm that we will be taking a break until 12:50 for lunch.

Off the record. Thank you.

(Off the record.)

(Whereupon, at the hour of 11:34 a.m., a recess was taken until 12:52 p.m.)]

* * * * *

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

AFTERNOON SESSION - 12:52 P.M.

* * * * *

RODGER SCHWECKE,

resumed the stand and testified further as follows:

ALJ HECHT: We'll be back on the record. We are coming back from our lunch break today. It is May 19th, and we have, I think, finished the cross-examination by SED and the Public Advocates Office of Witness Schwecke; so we are going to continue this afternoon with redirect done by Attorney Patel. We also -- I will note -- have a different attorney representing the Public Advocates Office with us, rather than Traci Bone, we have now Caryn Mandelbaum.

With that, I think we can continue.

If your ready, Ms. Patel?

MS. PATEL: Yes, your Honor. Thank you.

REDIRECT EXAMINATION

BY MS. PATEL:

Q Good afternoon, Mr. Schwecke.

A Good afternoon.

Q A little while ago, Ms. Bone from the Public Advocates Office asked you about location, where you worked with Boots & Coots

1 and the other experts that you spoke about
2 yesterday and today. We're going to pull up
3 CPUC Exhibit 1000, which is the Main Blade
4 Root Cause Analysis Report that's been
5 admitted into the record, and we're going to
6 go to page 37.

7 Mr. Schwecke, do you recognize this
8 as a portion of the Aliso Canyon Storage
9 Facility?

10 A Yes, I do.

11 Q Can you describe what we are
12 looking at.

13 A Well, these are two different views
14 of the SS-25 well pad in the vicinity and
15 taken at different times. If you look at the
16 one on the bottom that was taken after the
17 well was sealed, so that showed that the
18 SS-25 location up at the top, and then it
19 showed, as I mentioned with Ms. Bone, SS-9,
20 which was a staging area, as it's listed
21 here, but it actually was a location in which
22 we had trailers on -- that we worked on.

23 And if you go back up, the one on
24 the left, if you see in the lower, left-hand
25 corner, you can see a couple buildings and
26 trailers. That one building that has the
27 gray roof, that was actually one of the
28 trailers we used.

1 And you can see across the other
2 side of the road, the guard shack that we
3 used to control access there and that was
4 under the control of the PUC.

5 You can see that and I think it's
6 very difficult to look beyond that on the
7 picture to the right. You can't really --
8 you can barely see those same tanks that were
9 on that SS-9, but I think if you see off
10 farther in the distance, how far the
11 community is away.

12 But you also see what could be hard
13 to identify, but just -- I like to use the
14 clock term. Not digital clock; the old hand
15 clock. If you look at about 11:30 or 11:00,
16 you'll see an area that has a white building.
17 That's actually SS-39 well pad. That's where
18 relief well was drilled. So that kind of
19 gives you a perspective, and it also shows
20 winding roads that we have at Aliso Canyon.

21 MR. GRUEN: Your Honor, if I --

22 ALJ HECHT: Mr. Gruen.

23 MR. GRUEN: If I may, this seems to be
24 straying very close to what the -- how shall
25 I put it -- demonstrative exhibits maybe were
26 showing and straying right on the cusp of
27 what the answer to Ms. Bone's question was.
28 The objection is that the answer should stay

1 within the scope of Ms. Bone's questions
2 about the communications and the location of
3 them.

4 ALJ HECHT: Ms. Patel.

5 MS. PATEL: Yes, your Honor. I believe
6 that we are well within the scope of the
7 cross-examination that was conducted both by
8 SED and Cal Advocates. I would add that this
9 exhibit is in the record.

10 ALJ HECHT: Thank you.

11 Mr. Gruen, briefly.

12 MR. GRUEN: Your Honor, it's not the
13 exhibit. It's the testimony describing it,
14 and the testimony is starting to stray well
15 beyond the question about communications with
16 Boots & Coots and the testimony about it in
17 response.

18 ALJ HECHT: Thank you.

19 Objection overruled. This is
20 something that is in the testimony, and we've
21 had extensive discussion about locations and
22 relationship, and where these were.

23 We disallowed the demonstrative
24 exhibit that had not been identified
25 previously, but this, as Ms. Patel said, is
26 an exhibit that we have already seen.

27 So, Ms. Patel, you may continue.

28 MS. PATEL: Thank you, your Honor.

1 Q Mr. Schwecke, I apologize if this
2 is a little redundant, but where did you
3 spend the majority of your time during the
4 incident?

5 A Well, you know, the majority of the
6 time, I mentioned the trailers. We spend a
7 lot of time in trailers, but we also spent a
8 lot of time at other locations, you know,
9 actually on the SS-25 well pad. We spent
10 time on the PS-20 well pad, which was a
11 relief well too; SS-1, which was the
12 observation area above, and the alternate
13 pump site. So there's a lot of different
14 locations.

15 And, actually, as the incident
16 transitioned to the relief well, we moved our
17 trailer down closer to the relief well to be
18 closer and across the road from that so we
19 could have easy access to what was going on
20 at the relief well and the work that
21 Halliburton and Sperry were doing in drilling
22 the relief well.

23 Q When you say that you moved closer,
24 do you mean that trailers were brought into
25 the location?

26 A Yeah. We brought additional
27 trailers in, had to clear a location on what
28 would be the south side of the road before we

1 could set these trailers. I mean, they're
2 like double-wide trailers, using that
3 terminology; running the fiber optics, so we
4 had communication; you know, making sure we
5 had badge-access only in those buildings.

6 We had to put those in so we were
7 across the road from the drilling rig so we
8 have easy access.

9 Q And did you indicate earlier today
10 that you were working with Boots & Coots in
11 one of those trailers?

12 A Yes, I did. When we were on SS-9,
13 that was the trailer that we, basically,
14 would huddle in every day that we meet in the
15 morning and the afternoon and all day long.

16 Likewise, when we moved the trailer
17 down to -- closer to the relief well, not
18 only did we have Boots & Coots, but we had
19 the Halliburton people in there; we had the
20 Sperry people, which was doing the drilling
21 diagonals. We had the other -- the other
22 experts: We had John Wright; John
23 Shackelford; when Arash was there, that's
24 where he would sit. So we were all in this
25 trailer collaborating continually through the
26 day.

27 Q Okay. Thank you.

28 Now, Mr. Gruen asked you a number

1 of questions implicating the reporting
2 structure of the incident command structure.
3 What is the purpose of the incident command
4 structure?

5 A The incident command structure
6 falls out of FEMA's Emergency Response
7 System, an Incident Command System. And what
8 it does is, it creates a hierarchy of
9 reporting relationships, along with
10 functional relationships in response to an
11 incident.

12 That system established by FEMA
13 allows it to contract and expand based on the
14 size of the incident. I mean, we use our
15 Incident Command System every single day we
16 have an incident. If it's just a small leak
17 on a pipeline system, we have an Incident
18 Command that's established that manages that
19 leak, manages the resources.

20 And if it expands, like it did here
21 with this leak, you add resources, you add
22 people, whether you have -- you know, you add
23 your PIO office. You establish the section
24 chiefs, like operations, regulatory liaisons,
25 logistics all working together, reporting in
26 through an Incident Commander, where the
27 ultimate decisions are made across all the
28 areas of the Incident Commander. Each of the

1 section chiefs, basically, makes their
2 decision on their areas in consultation with
3 the Incident Commander.

4 Q Understood. Is this the same
5 incident management structure that FEMA uses?

6 A Yes. I mean ICS or Incident
7 Command Structure is what all agencies use.
8 Cal Fire uses it if they are responding to a
9 fire incident. LA City uses it when they
10 respond to a fire. I mean, any time there is
11 an emergency the Incident Command Structure
12 is typically used to establish hierarchy,
13 especially when you have multiple agencies.
14 If you have multiple agencies, you need to
15 know and communicate within the same channel
16 the same information.

17 And that's where you'd take
18 multiple agencies, and then you'd establish
19 Unified Command, where you have -- actually,
20 the Unified Command is a team of Incident
21 Commanders that would respond; so it's a
22 typical system that's used throughout
23 emergency management.

24 Q Did SoCalGas implement a Unified
25 Command System at some point during the
26 incident?

27 A Yes. When we had Department of
28 Public Health and LA County Fire come more on

1 site, then we, basically, moved to a Unified
2 Command System where you had LA County Fire
3 and DPH were part of that process, and they
4 met on a daily basis.

5 You have command staff meetings,
6 which is the higher levels of the staff, all
7 the way down to each of the organizations or
8 each of the functions. Like, we would do on
9 the operations side, we would have our
10 operation section meeting on a regular basis,
11 which would include parties from LA County
12 Fire, for example.

13 Q Okay. Now, Mr. Gruen asked you
14 about your experience with well kills. Were
15 you at Aliso for all of Boots & Coots
16 well-kill attempts?

17 A I was at the Aliso Canyon site. I
18 was not up on the well for the kill attempt,
19 the first kill attempt on November 13th, but
20 I was on the Aliso Canyon site, and from a
21 distance viewed what was transpired. I was
22 down the hill, so I could not see the actual
23 site.

24 Q And so you were involved in all of
25 Boots & Coots well-kill attempts expect for
26 their first one; is that correct?

27 A That is correct.

28 Q Okay. And then yesterday, you were

1 also asked about SoCalGas's procedure for
2 routine and emergency well kills. Are you
3 familiar with the gas standard that was in
4 place for well kills at the time the incident
5 occurred?

6 A Yes, I was. And we have a company
7 standard. Well, we have a lot of company
8 standards that govern all our activities, and
9 these in particular, govern well-kill
10 operations. That company standard addressed
11 both the issue of routine well kills versus
12 emergency well kills.

13 Practically they are the same, but
14 when you go to emergency, you're going to
15 have to factor in more and more of what
16 actually is transpiring at the given time.
17 Whereas, a standard one, where you don't
18 have -- you're just killing the well for
19 maintenance, there is no issue, that's much
20 more of a standard procedure.

21 You have to adjust that procedure
22 based on the situation that's occurred, and
23 that's what the engineer does before they
24 kill a job -- or kill a well.

25 Q Okay. Now, you also were asked a
26 lot about the modeling that Boots & Coots did
27 and their assumptions. Can you, please,
28 explain what you meant by "assumptions"?

1 A So when I talk about "assumptions,"
2 it's talking about those things that vary
3 within the incident: Reservoir pressure. At
4 the first one, it's really the wellbore
5 diagram and the well schematics; it's also
6 those type of items that change more general
7 in nature.

8 I wasn't referring to assumptions,
9 engineering assumptions, that were made
10 within the model that is used on how it's
11 calculated. Whether they're assumptions or
12 they're engineering factors, I don't know,
13 but I was referring to those areas that you
14 have a change because from one kill to the
15 next kill, the reservoir pressure changed,
16 for example, and then the output is the
17 well-kill plan.

18 Q Okay. And in the same discussion,
19 you were asked about Mr. Lane providing
20 approval. And what would Mr. Lane have
21 approved?

22 A Mr. Lane would, ultimately, approve
23 the well-kill plan, which was the output of
24 the model, and said: This is what we're
25 going to execute. This is the well-kill plan
26 that we're going to follow and execute, and
27 then we would go out and be prepared to do
28 that.

1 Q Okay. And we're going to pull up
2 Exhibit SoCalGas-09, which is the Attachment
3 to Reply Testimony of Bill Abel. He
4 testified previously and this exhibit is in
5 the record.

6 Do you recognize this as a
7 well-kill plan?

8 A Yes, I do.

9 Q With respect to the modeling, do
10 you have any reason to doubt Boots & Coots
11 sworn testimony that they conducted transient
12 modeling?

13 A No, I do not. I mean, as a
14 world-renowned well kill, that travels the
15 world to do just that. They are an expert in
16 the industry. They do what they know how to
17 do and based on their experience, what it
18 takes. They are experts, and those experts
19 will do what's best based on the information
20 they have and their experience as they are
21 on-site.

22 So this really is a kill program,
23 which lays out step by step the process we're
24 going to go through. I mean, this one that
25 you're showing on the screen really says,
26 first of all, you start with mixing the LCM;
27 right? And then you pump down a certain
28 amount of GEO Zan in this case, and it's a

1 step-by-step process, barrel by barrel, on
2 how you, basically, will execute the plan.
3 So it's very clear what are the steps you're
4 going to take one after the other before you
5 start the process.

6 Q Understood. Thank you.

7 Now, yesterday, Mr. Gruen asked you
8 extensively about the slots where the SSSV
9 was in SS-25 and whether the existence of
10 these slots was disclosed to Boots & Coots as
11 well as other experts such as Add Energy, who
12 were at Aliso assisting with the well-control
13 operation. What do you understand slots to
14 be?

15 A Well, in this case the slots are,
16 you know, they've been called "cross-over
17 ports"; they've been called "ports," but they
18 are what is manufactured into the housing
19 that would allow that gas flow from the
20 tubing into the casing.

21 So that's my understanding when you
22 use "slots." You can call it "ports"; you
23 can call it "cross-over ports," but it is
24 just a space that was manufactured in the
25 housing -- in the tubing that allowed for gas
26 to flow from the tubing into tubing-casing
27 annulus.

28 Q And are those slots or cross-over

1 ports different from the perforations that
2 Mr. Gruen has referred to from time to time?

3 A Well, I think when you look at what
4 perforations are, there's a couple different.
5 There's ones that are down in the reservoir
6 that are perforations in the casing that
7 allow gas to flow from the reservoir into the
8 casing and then up into the tubing and then
9 out those ports or you can look at what the
10 perforations were that occurred after the
11 plug was set in the tubing to create a flow
12 path for kill fluids from the tubing into the
13 2-7/8-inch and 7-inch annulus.

14 Q Okay. And with respect to slots,
15 again, the experts that we talked about --
16 Boots & Coots, Add Energy, others who were
17 assisting in this effort -- were they aware
18 that there were slots where SSSV used to be
19 in SS-25?

20 A Absolutely. There was no question
21 in my mind that they were fully aware of the
22 configuration of the well and communication
23 path from the tubing into the casing.

24 Q And do you believe that any of the
25 experts believed that there was still an SSSV
26 in SS-25?

27 A No. I do not believe that at all.

28 Q How do you know that?

1 A Well, it's pretty clear in the well
2 file that that hadn't been removed. So
3 anyone that read the well file -- I think it
4 is '79 or '80 -- that valve was removed and
5 not replaced.

6 Q Okay. If a well has slots or
7 perforations, do you consider that well to be
8 leaking?

9 A Well, can you define where that is?
10 If you're talking about slots or
11 perforations in the tubing that is within the
12 casing, no. I do not consider that to be a
13 leaking well. That is a known path of gas to
14 move from the tubing into the casing annulus.

15 Q And then I'll ask the same question
16 about slots and perforations: If a well has
17 slots and perforations, can it still be
18 killed by a top kill?

19 A Yes. I mean, we do that every time
20 today. In fact, when you look at it, that
21 actually helps facilitate a kill job because
22 you're able to circulate fluids and not just
23 try to push down on the pressure of the
24 fluid. So being able to do that, it allows
25 for the kill jobs today.

26 Q Okay. Thank you.

27 Now, you were also asked about
28 whether the various items we just discussed

1 were reflected in any well schematic
2 pertaining to SS-25. Are you the person
3 testifying in this hearing on behalf of
4 SoCalGas who is most familiar with well
5 schematics?

6 A No. I would not be the one that's
7 most familiar. I think Dan Neville would be
8 the one that is most familiar with wellbore
9 schematics, and I think he testified
10 extensively on it.

11 Q Okay. Now, you were also asked
12 yesterday whether SoCalGas had prepared any
13 document analyzing the causes of the failure
14 of SS-25. You indicated that SoCalGas had
15 not because the CPUC prohibited it.

16 Was it any particular entity within
17 the CPUC?

18 A Yes. Once the well was certified
19 by DOGGR, you know, the agency that basically
20 was certifying the leak had stopped --
21 because that is their agency
22 responsibility -- SED, the CPUC's Safety and
23 Enforcement Division, basically, then took
24 control of the site, and then actually had us
25 cordon off -- and I mentioned the guard
26 shack -- but, actually, had cordoned off by
27 the use of ropes, I think it was,
28 approximately a 300-foot circle bounded by

1 the roads, anyways, on the two sides, with
2 rope, which clearly delineated the area,
3 which they had taken responsibility for and
4 control over. So it was SED that instructed
5 us to do that.

6 Q Okay. And so when you say that you
7 were prohibited from doing such an analysis,
8 would it be fair to say that it would not
9 have been feasible or practical given these
10 limitations?

11 A Yeah. It would not be feasible. I
12 mean, we were instructed, one, not only to
13 create the area, but no disturbing any of the
14 evidence; no destruction of any of the
15 materials. I mean, we were, basically,
16 hands-off.

17 And we were there to support
18 Blade's effort because Blade had been
19 contracted to do the Root Cause Analysis. We
20 were not to interfere with their activity,
21 only to support them in getting to completion
22 of their report, which I think everyone knows
23 took quite a while to do.

24 Q Okay. Now, this morning you were
25 shown a demonstrative of a small portion of
26 Mr. Dan Neville's testimony from May 5th,
27 and, Mr. Moshfegh, if you could pull that up.
28 Perfect. Thank you.

1 And I believe you were shown a very
2 specific line in it, and you indicated that
3 in order to answer the questions you were
4 asked, you would need to review the portion
5 that came before that. Have you now had the
6 opportunity to review the discussions
7 surrounding that one excerpt?

8 A Yes, I have.

9 Q Okay. Is it your understanding
10 that Mr. Neville is referring here to setting
11 a plug during routine well maintenance back
12 in 2007?

13 A Yes. According to Dan's testimony,
14 this referenced the ability to set a plug in
15 2007 during a time when it was -- gas was not
16 flowing; in other words, it was not a leaking
17 well. We were going to perform some
18 maintenance on the well. So it's a
19 completely different situation than what was
20 being addressed on Tom Egbert's e-mail in
21 which we had a situation where you had a
22 leaking well, and our procedures and
23 standards provide that you have the option,
24 if you can -- if you believe you can set a
25 Wireline plug, but if you can't, you go to
26 kill fluid.

27 And that is a game-time decision.
28 That is a decision that's made based on the

1 engineering site and what information they
2 have. So unlike the 2007 where there was no
3 gas flowing; here we had gas flowing. So
4 from that standpoint, the decision was made
5 to go right to kill fluids.

6 Q Okay. Thank you.

7 And I think I heard Ms. Bone refer
8 to such a plug as a safety plug. Is that an
9 accurate description?

10 A No. I think you can see the part
11 here, it's a Wireline plug. We call it a
12 "plug," "Wireline plug." I've never heard it
13 referred to as a safety plug.

14 Now, I would say it provides safety
15 because it provides a barrier between the
16 reservoir and the surface, but "safety plug"
17 is not a term I've heard.

18 Q Thank you.

19 Okay. And, Mr. Moshfegh, if you
20 could please go back to the Exhibit 1000.
21 Thank you so much.

22 And, you know, I asked you earlier
23 about SED taking over a portion of the site.
24 Can you generally describe where that was on
25 this image.

26 A Yeah. Actually, if you could go to
27 the lower diagram, it might be easier to
28 start with. If you see that dotted line,

1 that's kind of the roadway. So on the
2 right-hand side, which would be the eastern
3 side, that's basically where we used the road
4 as a delineating factor, which would be on
5 the downhill side of the road. Then we would
6 run -- and ran up above where it says
7 "collection" --

8 Q Uh-huh.

9 A -- up above that location.

10 And maybe you could go to one of
11 the other diagrams. I think if you were to
12 look at the diagram to the right, you could
13 see how you delineate where the road was on
14 the bottom of the hillside, and it would
15 extend up past what looks to be a tree kind
16 of on the left-hand side. I wish I could
17 point to it. I'm pointing to it with my
18 finger, but you can't see where I'm pointing
19 to, but it would run up a hill, and you have
20 to think of a 300-foot circumference around
21 the well, was the defined area of control by
22 SED.

23 Q Okay. Thank you.

24 And you said that was for purposes
25 of collecting evidence for Blade?

26 A Yes. You know, I think one of the
27 first then steps they went through in the RCA
28 was looking at the surface material, and I

1 don't know if we had Blade, but we had Randy
2 Holter of the CPUC was there, you know, going
3 through the materials and the soil that was
4 on-site to see if there was any materials
5 that could be found.

6 A lot of times when you look at a
7 pipeline incident, then you could find things
8 that sit on the surface. This, obviously,
9 was occurring at 890 feet, but they did go
10 through that process of looking and taking
11 samples, so...

12 Q You said, "taking samples." Where
13 was the evidence taken?

14 A Well, any evidence that was taken,
15 was then taken by Blade, and it was then
16 taken as -- they maintained control of the
17 evidence. We provided evidence trailers, but
18 they're the only one that had keys for, and
19 they basically cataloged and logged
20 everything and kept all that information
21 along with taking -- I wouldn't venture, you
22 know -- tens of thousands of pictures
23 throughout the process.

24 Q Okay. And then you also said that
25 SED was on the site. Were they on the site
26 frequently during this time when the evidence
27 was being collected?

28 A I would say SED was on-site even

1 before evidence was being collected. I think
2 we had -- a lot of our safety morning
3 meetings, SED was present. There was many
4 days that, you know, that I would have to
5 provide an escort, Randy, for example --
6 Randy Holter, for example, up to do a visual
7 inspection of SS-25 while it was leaking,
8 from our trailers on SS-9. So they were
9 there quite often, and, obviously, they were
10 there even more often, when they started
11 their Root Cause Analysis.

12 ALJ POIRIER: Excuse me. It looks like
13 there is a side chat. Mr. Stoddard, you're
14 sending chats to the whole service list?

15 MR. STODDARD: Yeah, your Honor.
16 Sorry. I was telling -- the court reporter
17 asked a question for clarification and I just
18 asked her to raise it on the record, instead
19 of chatting with me about it, if she couldn't
20 understand something Mr. Schwecke said.

21 ALJ POIRIER: Okay. Thank you.

22 ALJ Hecht, do you want to address
23 that now?

24 ALJ HECHT: Yes. Let's address that
25 now. What was the clarification that was
26 needed?]

27 MR. STODDARD: The court reporter, and
28 I can let her ask, but Ms. Ross asked about

1 some names that Mr. Schwecke had referenced
2 that she couldn't catch because he was
3 speaking too quickly.

4 Do you want -- Ms. Ross, do you want
5 to identify the names you had issues -- that
6 you couldn't understand?

7 ALJ HECHT: If Ms. Ross is speaking, we
8 cannot hear her.

9 REPORTER MENDEZ: Hello. This is Carol
10 Mendez. We switched court reporters. She's
11 no longer on.

12 REPORTER S. ROSS: Your Honor, it was
13 Andrea Ross, and for some reason or -- we can
14 just check that later. I don't think she
15 meant for this to be an interruption.

16 ALJ HECHT: That's fine. We'll address
17 it later. And this is an object lesson in
18 why we speak slowly and especially carefully
19 around names that have not yet been
20 introduced to the record.

21 So, let's see. Are we on or off the
22 record?

23 REPORTER MENDEZ: On.

24 ALJ HECHT: We are on the record, which
25 is good. So we can just continue, Ms. Patel.
26 BY MS. PATEL:

27 Q Mr. Schwecke, I will just ask you,
28 can you please spell Randy Holter? I believe

1 you referred to his name a few times.

2 A I believe his last name is spelled
3 H-o-l-t-e-r.

4 Q Thank you.

5 A And I will attempt to talk slower.
6 I apologize.

7 ALJ HECHT: It's a common problem.
8 It's not unusual at all.

9 BY MS. PATEL:

10 Q Mr. Moshfegh, I apologize. I had
11 one last question regarding that visual.

12 Mr. Schwecke, you had indicated
13 that SED was on-site during evidence
14 collection. And did SED have a trailer at
15 Aliso during that time period?

16 A Yeah. During the root cause
17 analysis, we provided trailers to not only
18 Blade, Blade wanted their own trailers, but
19 we also provided to SED. And if you take a
20 look at the picture on the right, and if you
21 could blow that up, it might be easier to
22 see. Just down below where I think you see
23 those trailers to -- almost there.

24 Well, anyways, if you follow the
25 road in the bottom just before it turns left
26 the second time, right down there, is our
27 SS-3 well pad in which we located numerous
28 trailers during the incident and after the

1 incident, the root cause, and that's actually
2 where we had most of our morning meetings.
3 That was our point of congregation to get
4 together in the mornings before anyone would
5 go up on-site, because during a leak, it was
6 Boots & Coots that would go on-site to check
7 for safety before anyone else and we would be
8 located down on SS-3.

9 Q And Blade's trailer was in the same
10 area?

11 A Well, Blade had a couple of
12 different locations. They had one in that
13 area, but they also had one down in the main
14 offices because they need a lot of space for
15 the number of people they had, the amount of
16 materials they gathered. The also had a
17 trailer that was on PS20, which was the
18 relief well, the second relief well site.
19 That's where they moved all the tubulars that
20 they took out of the well to that location
21 for inspection.

22 Q Okay. And did you have access --
23 did SoCalGas have access to the Blade and SED
24 trailers?

25 A No. We did not.

26 Q Okay. And the evidence that was
27 taken by Blade, was that evidence taken back
28 to Houston to Blade's headquarters?

1 A Yeah. I believe the majority of
2 that Blade wanted to take back to do any of
3 the laboratory analysis on was moved back to
4 Houston. I think it still sits in Houston.

5 Q Today it still sits there?

6 A I believe so.

7 Q All right. Thank you.

8 Mr. Moshfegh, if we could please go to
9 Exhibit SED-323.

10 Mr. Schwecke, this morning you were
11 questioned about this e-mail, particularly
12 the second bullet point. Do you have
13 anything you would like to add?

14 A Yeah. I think Tom, when he drafted
15 this, and again this was drafted for Todd
16 Van de Putte to use in an e-mail
17 communication that he was going to do or
18 possibly do. And I think Tom probably
19 mistakenly identified that the casing of
20 tubing below the packer, the communication
21 ports below the packer, I don't think he was
22 correct --

23 MS. MANDELBAUM: Your Honor. Excuse
24 me. I'm sorry. This calls for speculation.
25 I believe that Mr. Schwecke is speculating
26 about Tom's meaning in this e-mail.

27 MR. GRUEN: Your Honor, if I may add to
28 that, I echo that objection and add this is

1 hearsay in the extreme. This is a witness
2 that now SoCalGas has not offered and
3 Mr. Schwecke is going to testify as to what
4 his understanding is about Mr. Egbert's
5 e-mail.

6 ALJ HECHT: Ms. Patel, do you have a
7 response?

8 MS. PATEL: Sure. I think that clearly
9 SED and maybe Cal Advocates also were trying
10 to make a point as to what this e-mail says
11 and Mr. Schwecke is testifying as to what his
12 understanding is. We are not speculating as
13 to what Mr. Egbert may have meant.
14 Mr. Schwecke is noting a correction.

15 ALJ HECHT: All right. Let's stick
16 with what this witness knows himself and
17 avoid hearsay. Please continue.

18 BY MS. PATEL:

19 Q Mr. Schwecke, let me clarify here.
20 The second bullet point here, do you know
21 this to be accurate or inaccurate?

22 A The statement made here is
23 inaccurate because it defines, you know,
24 below the packer, the communication ports
25 below the packer. We know that those
26 communication points were above the packer,
27 which is the only way you can create a
28 communication path where tubing is into the

1 casing.

2 So -- and I would also like to
3 point out the time this was done.

4 (Inaudible) was at 9:30 in the morning, which
5 most of these gentleman, Tom in particular I
6 think, was probably up all night, or at least
7 most of the night, but the statement he has
8 down there is inaccurate based on my
9 information.

10 Q All right. Thank you. Okay. Now,
11 you were also questioned this morning about
12 Exhibit 317, which is an e-mail from
13 Mr. Mansdorfer to Rudy Weibel in 2009.

14 You mentioned in the context of
15 that questioning that you had had some
16 earlier discussions with Mr. Mansdorfer.
17 Could you please elaborate on those?

18 A Well, I think when I talk about
19 earlier discussion, it was discussion in the
20 2011 time frame, which was actually after the
21 e-mail when I was director of storage and Jim
22 worked for me.

23 Jim's e-mail in 2009 laid out what
24 the potential issues could be for a casing
25 leak. Jim typically had expressed concern to
26 me about the seismic concerns and I think he
27 mentioned in that e-mail is the Santa Susana
28 fault.

1 Jim, with his geological
2 background, was concerned that you could have
3 a slippage of the Santa Susana fault, which
4 could cause a sheering of the wells and
5 basically have multiple wells where you have
6 an incident. And that's where Jim was
7 looking at it. And part of his thought about
8 subsurface safety -- subsurface safety valves
9 related to that.

10 I think there was another e-mail we
11 talked about where Jim kind of changed his
12 opinion with regard to deep set subsurface
13 safety valves after our experience with
14 Miller 4 Well and then SSSV.

15 Q Thank you. Were you saying
16 sheering?

17 A Well, if you think about geological
18 movement is caused by across-the-fault
19 movement in a horizontal direction.

20 ALJ HECHT: It appears that we have a
21 question or comment from Mr. Gruen. Would
22 you -- is it relevant to this discussion?

23 MR. GRUEN: It's an objection, your
24 Honor.

25 ALJ HECHT: Okay. Go ahead.

26 MR. GRUEN: I object. This is new
27 testimony. Mr. Schwecke was not asked about
28 landslide or movement.

1 MS. PATEL: Mr. Schwecke is discussing
2 matters that are directly in the exhibit that
3 is SED's exhibit.

4 ALJ HECHT: I do recall mention of
5 landslides, though it was in a slightly
6 different context. And this is referring to
7 one of the exhibits. So I am going to
8 overrule the objection and please continue.

9 MS. PATEL: Thank you, your Honor.

10 Q Mr. Schwecke, I believe you were
11 interrupted. I had wanted to clarify you had
12 said "sheering." I wasn't sure if it was
13 sheering or sharing.

14 A Sheering. If you think of the
15 Santa -- Jim's concern is, you know, as
16 expressed, if the Santa Susana fault was to
17 shift and you had a well that ran through it,
18 you could have sheering of that well or
19 bending of that well that could affect its
20 integrity.

21 So that's what -- Jim mentions all
22 the items, but in particular I think in the
23 first paragraph he talks about the Santa
24 Susana fault and that had been his concern
25 that he had expressed to me over the period
26 of time in which he worked for me.

27 Q And Mr. Mansdorfer also refers to
28 the 2012 rate case in that e-mail. Did the

1 recommendations he made in the e-mail make it
2 into the 2012 rate case?

3 A No. We didn't. You have to
4 remember the 2012 rate case was being looked
5 at, but also during that period of time, this
6 was post the San Bruno incident and there was
7 a Commission proceeding which was for filing
8 or Pipeline Safety Enhancement Program, our
9 PSEP. That program we were looking at filing
10 not only with regard to our horizontal
11 transmission pipelines, but looking at
12 including our storage wells as part of that
13 inspect or test program, because PSEP related
14 to pressure testing or replacing pipelines.

15 The Commission came out with a
16 scoping ruling that focuses solely on the
17 pipelines. So at that point in time, we
18 looked at development of our integrity
19 management program related to storage or
20 SIMP, which we ultimately filed.

21 MR. GRUEN: Your Honor, if I may, this
22 is going well beyond the scope of cross.

23 We're not -- the cross didn't focus
24 with Mr. Schwecke about SIMP or pipelines.
25 This is exceeding the scope of cross.

26 ALJ HECHT: I think, at this point, it
27 is exceeding the scope of cross. Ms. Patel,
28 you should try another line.

1 MS. PATEL: Your Honor, may I respond
2 to that?

3 ALJ HECHT: Yes, you may.

4 MS. PATEL: So the 2009 e-mail, and
5 maybe it would be helpful if we could
6 actually bring it up, but in that e-mail, it
7 discusses certain practices, and Mr. Schwecke
8 is talking about the evolution and those
9 practices going into a program in the general
10 rate case. These are matters that are
11 directly discussed in the e-mail.

12 ALJ HECHT: If you can tie it to the
13 e-mail specifically, then we will allow a
14 question that is tied to that.

15 MS. PATEL: Thank you, your Honor.

16 Mr. Moshfegh, could you please
17 scroll up? You know, I apologize. I
18 apologize. We have moved on to a different
19 exhibit. This would be Exhibit 315. Sorry,
20 Mr. Moshfegh. All right.

21 Q And up here, it's this first
22 sentence. So, Mr. Schwecke, do you see where
23 it says:

24 Yes, we do the casing inspection,
25 pressure testing, wellness seal
26 and valve replacement whenever we
27 have a rig on a storage injection
28 well.

1 A Yes. That's what the e-mail says.

2 Q And do you recognize those
3 practices as part of an initiative at
4 SoCalGas?

5 A Yes. I mean casing inspection and
6 pressure testing and valve replacement when a
7 rig is on a well is part of our Storage
8 Integrity Management Program.

9 Q And so did the Storage Integrity
10 Management Program eventually make its way
11 into a rate case?

12 A The storage integrity program which
13 we developed was somewhat similar in
14 following the Transmission Integrity
15 Management Program that had been in place for
16 some time, was filed in 2014 for our 2016
17 GRC.

18 Q Thank you. With respect to this
19 same e-mail, Mr. Gruen had asked you about
20 SSSVs and you indicated there were issues
21 with reliability. Can you please elaborate
22 on what you meant by reliability?

23 A Yeah, I think when you think about
24 reliability, there's actually two areas; one
25 is the actual valve reliability and being
26 able to have that valve work. If it doesn't
27 work and doesn't perform the function that
28 it's supposed to, it's unreliable.

1 The other issue it could translate
2 to reliability from a deliverability
3 standpoint. If the valves were to close
4 suddenly without notice, that would impact
5 deliverability on a storage field which
6 ultimately could impact the reliability of
7 gas service to customers.

8 Q All right. Thank you.

9 Mr. Moshfegh, if we could now go to
10 Exhibit SED-314.

11 And this is an e-mail from
12 Mr. Mansdorfer to certain SoCalGas personnel,
13 including you. When was this e-mail sent,
14 Mr. Schwecke?

15 A The date on the e-mail is
16 November 20, 2015.

17 Q And was that during the well
18 control incident?

19 A This is a period during the leak of
20 the SS-25.

21 Q And what was Mr. Mansdorfer's
22 involvement in the incident at the time he
23 wrote this e-mail?

24 A Jim was not involved in the
25 incident, or incident management at all, on
26 November 20th.

27 Q And Mr. Moshfegh, could you scroll
28 down, please, second page?

1 And Mr. Mansdorfer provided you
2 with what he entitled "Solutions." Do you
3 see the first solution, "reduce reservoir
4 pressure in the vicinity of the well?"

5 A Yes, I see that.

6 Q Did you consider this solution?

7 A At the time we received the e-mail,
8 we had already executed this approximately
9 nine days earlier and started that process of
10 reducing the reservoir pressure in the
11 vicinity of the well. We began withdrawals
12 on November 11th.

13 Q And Solution 2 where it says,
14 "start a relief well ASAP," did you consider
15 this solution?

16 A We were already executing on
17 planning the relief well, at the time this
18 e-mail was sent. We started it very close
19 after the incident. And the first well kill
20 that was performed by us was unsuccessful.
21 As a contingency, we started planning,
22 knowing that it would take some time to plan
23 a relief well.

24 Q And Solution No. 3, "pumping into
25 SS-25," did you consider this solution?

26 A Yes. I mean these were the kill
27 jobs, and part of that was bringing Boots &
28 Coots on board with their expertise in

1 developing of kill plans on how to kill a
2 well. So this was something that we were
3 looking at, and by this time had already
4 executed three different well kills.

5 Q Thank you. So moving on,
6 Mr. Moshfegh, if you could please pull up
7 Exhibit SED-276. And this is the CoreLab
8 report.

9 While we are waiting on the
10 exhibit, Mr. Schwecke, do you know why the
11 CoreLab report was prepared?

12 A At the request of Boots & Coots, we
13 wanted to get additional information on
14 SS-25, and once the hydrate was removed from
15 the tubing, we basically had CoreLab run
16 their tools. I think Western Wireline
17 actually ran the tools for them, so, for them
18 to give us analysis to provide more
19 information on what was happening on the well
20 itself, once the hydrate was cleared.

21 Q And Mr. Moshfegh, could you go to
22 page 6, please?

23 Now yesterday Mr. Gruen asked you
24 about the reference to a cooling anomaly at
25 about 890 feet?

26 A Yes.

27 Q And does this report say that it's
28 referring to the surface casing?

1 A Yes, they referred it to the
2 surface casing at 890 leak.

3 Q And is the surface casing distinct
4 from the production casing?

5 A Yes, it is. The production casing
6 sits inside the surface casing.

7 Q Okay. Thank you. And you were
8 also asked questions about the Add Energy
9 report. That's Exhibit SED-281. That report
10 was prepared by Mr. Mort Emilsen. You walked
11 through that yesterday. Who is Mister --
12 maybe it's Dr. Emilsen?

13 A I like to use just his first name,
14 Morten. He was basically a well modeling
15 expert, probably one of the best in the world
16 to come in that we brought in to assist us
17 primarily with regard to the relief well. I
18 mean at this point in time, we were looking
19 at gathering a complete brain trust of
20 individuals that had a wide range of
21 experience and technical capabilities. And
22 he was brought in to assist in looking at
23 contingencies and well kills, primarily for
24 the relief well.

25 Q And do you know why he prepared
26 that report?

27 A I think in looking at the relief
28 well, he wanted to look at the circumstances

1 which transpired up until that point.
2 Looking at those gives a better idea what
3 circumstances might be and what contingencies
4 you have to look for, as you're looking at
5 putting together a kill plan for the relief
6 well. And I think we talked about it. Some
7 of these potential washouts or cavities, flow
8 through the WSOs. Those were all
9 contingencies, because -- if you indulge me a
10 little bit -- if you're drilling a relief
11 well, in the drilling process, you're
12 circulating drilling mud through that
13 process. And you're circulating wanting to
14 create lubricant but also to pull the
15 cuttings from the drilling up back to the
16 surface. If you were to be drilling and
17 suddenly hit a cavity, you would have a
18 sudden loss of fluid that would just flow
19 into that cavity, and any time you have fluid
20 loss, you have to try to make it up at
21 surface. And if you're unable to make it up
22 and you drill into a cavity, you could have
23 potential for gas flowing back up your
24 drilling hole to the drilling well where you
25 have a BLP to protect you, but it may kick
26 out something. So you have to prepare for
27 that contingency and have sufficient fluids,
28 that if you do hit something like a cavity,

1 you're prepared to respond to it. So I kind
2 of -- a little long-winded there. I'm sorry.

3 Q No. It's okay. So it sounds like
4 this possible cavity area was important for a
5 relief well. Was it similarly important for
6 a top kill?

7 A Well, the top kill, as I mentioned
8 this was in the drilling operations, not
9 necessarily the kill. If you're trying to do
10 a kill, you're actually trying to intercept
11 the well from the relief well. But on top
12 kill, you're not basically going into the
13 formation. You're really pumping down the
14 tubing out through either the ports or
15 perforations to fill up the annulus with
16 fluids. You're not coming in from the bottom
17 and having a cavity that you would hit.

18 Q Okay. Thank you. Now, you were
19 also asked yesterday by Mr. Gruen about the
20 SS-25 well records that Boots & Coots asked
21 for. Were documents provided to Boots &
22 Coots before they arrived at Aliso?

23 A Yeah. In order to get Boots &
24 Coots up to speed as fast as possible, we
25 basically -- I don't know if we faxed it to
26 them. We sent electronic versions of key
27 portions of the well file to them so they
28 could review it on their flight out. Then

1 once they got here, we provided the full well
2 file for their use throughout the incident,
3 and I think I mentioned it was kept in our
4 operational trailer.

5 Q Okay. Who worked at the well file
6 during this time at Aliso?

7 A I think that the well file was
8 looked at by all the individuals. You know,
9 you want to pull it up and look at to jog
10 your memory or you want to -- or just to
11 confirm something. So whether it was the
12 SoCalGas, myself, Bret Lane and others, or
13 whether it was the Boots & Coots individuals,
14 whether it's the Halliburton, whether it was
15 Don Shackelford, John Wright; anyone that was
16 on-site used that file. And, you know, I
17 will say that not once did I hear any of
18 those individuals express concern about the
19 information that was in that file. And if it
20 wasn't in that file, they would ask for
21 information, because that's only a portion of
22 all the records associated with the well, and
23 we would go get the records that they're
24 looking for to perform their functions, so.

25 Q When you refer to "the file," are
26 you referring to the hard copy well file?

27 A Yes, the hard copy well file.

28 Q And all the experts have access to

1 the hard copy well file?

2 A Yeah, because we had it in the
3 trailer we working at so they all could
4 basically look at it throughout the day.

5 Q Okay. Did you ever hear any of the
6 experts say they didn't understand any of the
7 documents in the well file?

8 A No. I never heard them say
9 anything like that.

10 Q Did you ever hear any of the
11 experts say they wanted any kind of records
12 that they didn't have?

13 A No. I did not hear anything. They
14 would ask for an additional record, whether
15 it was a log run or something, we would go
16 down to the files and bring it back up. So
17 not once did they ask for something that we
18 didn't have.

19 Q Did any of the experts raise
20 concerns about the condition of the hard copy
21 well file?

22 A Not to me, they did not.

23 Q Did any of the experts raise
24 concerns about the accuracy of documents in
25 the well file -- the hard copy well file?

26 A No. I think most of them were very
27 appreciative of what we had and the documents
28 that we had for their availability and use.

1 Q Did any of the experts say they
2 didn't have anything they needed for purposes
3 of a well control operation?

4 A No. They did not.

5 Q Okay. Now, Mr. Gruen also asked
6 you about communications with the various
7 persons at the Aliso facility. Were you
8 communicating with all the experts who were
9 there?

10 A Yeah. I mean we sat in the trailer
11 and we would get together and huddle and have
12 conversations throughout the day.

13 Q I was going to ask how frequently,
14 but if you say throughout the day, you mean
15 every day; is that correct?

16 A We had a meeting at least once a
17 day.

18 Q And were you communicating with
19 DOGGR?

20 A Yeah. DOGGR was on-site and they
21 would come on-site every day because part of
22 what they want to do is actually review their
23 site. They wanted to have visual inspection
24 of the SS-25 well site throughout the leak.
25 So I would escort them up to that site and we
26 would do a visual inspection of that site on
27 a daily basis.

28 Q Were you also communicating with

1 SED?

2 A Yes. There was many days in which
3 SED was on-site asking for the same visual
4 inspection of the site.

5 I would also say that I can't
6 remember when we started, but we started
7 having daily calls with DOGGR and other
8 agencies and briefing them on what was
9 happening and what the next steps we're going
10 to be. So we started that process and I
11 can't remember the exact date.

12 ALJ HECHT: One moment. I just want to
13 ask if you're going to come across a break at
14 some point, I'd like to take an early
15 afternoon break at some point reasonably
16 soon, but I don't want to disrupt the
17 redirect.

18 MS. PATEL: I can ask one more question
19 on this topic and we can take a break if it's
20 okay.

21 ALJ HECHT: That would be great. Thank
22 you very much. Please proceed.

23 BY MS. PATEL:

24 Q Mr. Schwecke, these communications
25 that you were referring to, were they all
26 formal meetings or did you also have informal
27 communications with DOGGR and SED?

28 A Besides the formal meetings, we had

1 informal conversations with them. Any time
2 you would run across them in the field or,
3 you know, at lunch or whatever it was, you
4 obviously would have informal conversations
5 with them.

6 MS. PATEL: Okay. Your Honor, we can
7 take the break now, if it's a good time.

8 ALJ HECHT: All right. With that, we
9 will take a break until 2:05. And we will
10 return then and resume the redirect.

11 Thank you, Witness Schwecke, for
12 your patience that we're bringing you back
13 and forth.

14 We'll be off the record.

15 (Off the record.)

16 (Recess.)]

17 ALJ HECHT: We'll be back on the
18 record. We just took a short afternoon break
19 and we will resume the redirect with
20 Ms. Patel.

21 MS. PATEL: Thank you, your Honor.

22 Mr. Moshfegh, could you please bring
23 up Exhibit SED-218. If you could go to the
24 next page. Okay.

25 REDIRECT EXAMINATION RESUMED

26 BY MS. PATEL:

27 Q Mr. Schwecke, you were shown this
28 exhibit, gosh, I think it was today. This is

1 an e-mail from Jim LaGrone of Boots & Coots
2 to Hilary Petrizzo who is a SoCalGas
3 employee; is that correct?

4 I believe you're still on mute.

5 ALJ HECHT: Yes, I believe you were
6 muted.

7 THE WITNESS: That was the first time
8 in two days.

9 ALJ HECHT: You're doing pretty well.
10 Everybody else has done that multiple times.

11 THE WITNESS: Apologize for that.

12 Yes, Hilary Petrizzo is a SoCalGas
13 employee.

14 BY MS. PATEL:

15 Q Okay. And this e-mail is dated
16 December 27, 2015, and what was going on at
17 Aliso around this time?

18 A Well, you know, the primary
19 objective, primary things going on at this
20 time was drilling of the relief well. This
21 is a very similar description that we had
22 when we looked at the Add Energy report that
23 had the washout. So this is very similar.

24 It's a similar theory and, in fact,
25 I don't know if Jim had talked to Morten
26 about it, but it really just talks about the
27 same type of potential situation of having a
28 cavity or, as the Add Energy report had, a

1 washout that you would have to deal with in
2 drilling the relief well as you became closer
3 and closer to your target point.

4 Q And to clarify, this is not an
5 issue if you're conducting a top kill; is
6 that correct?

7 A No. They are addressing it from
8 the standpoint with regard to the relief well
9 and not an issue for the top-kill events.

10 Q All right. And then Mr. LaGrone
11 writes, "We now have a new theory on what may
12 be happening on SS-25."

13 How often were there new theories
14 about how to kill the well?

15 A Well, you know, there was
16 obviously, as we were collaborating and
17 discussing, there was obviously since -- at
18 any given time we didn't know what was
19 actually happening. I mean it's buried deep
20 in the ground. You didn't know the path. So
21 there was always discussion, so new theories
22 or new possibilities, you know, this was more
23 a theory on what could be happening behind
24 the pipe at the wellbore.

25 They were happening on a regular
26 basis, you know. Is the leak at 800 feet, is
27 the leak at 300 feet? I mean you always had
28 those discussions.

1 Q Thank you. And was the well
2 condition changing during the time -- this
3 time period?

4 A Yeah, I think I mentioned it was a
5 very dynamic situation. One, you had a leak
6 of the well, two, you had withdrawals that
7 were occurring so you had reservoir pressure
8 was changing, you had prior kill attempts
9 that may or may not impact the well, the
10 wellbore did impact the flow of gas to
11 surface, you had the crater forming.

12 I mean it was an extremely dynamic
13 situation that was changing on a daily basis.
14 You'd go out there, leave one evening, come
15 back in the morning and something would have
16 changed. It may have been some projectile or
17 something come out of the crater so -- or it
18 may have sloughed off so it was obviously
19 changing.

20 Q Thank you. Now, Mr. Gruen asked
21 you yesterday why SoCalGas did not start
22 withdrawing from the reservoir sooner than
23 November 11, 2015. Could you --
24 foundationally, could you please describe how
25 SoCalGas' system works normally under normal
26 circumstances.

27 A Sure. The SoCalGas system is made
28 up of main transmission lines that come in

1 from the interstates -- connects to the
2 interstate pipelines at the
3 California/Arizona border or up in the San
4 Joaquin Valley and gas is -- the system is
5 designed to flow gas into the LA Basin with
6 declining pressures.

7 When you have your main load center
8 as the LA Basin, it also is designed around
9 the use of storage like Aliso Canyon to make
10 up for deficiencies as your demand
11 fluctuates. And the demand fluctuates --
12 when the demand goes up, you use it for
13 withdrawals. When the demand goes down, you
14 use it for injection.

15 So it is a balancing act that
16 occurs throughout each given day. Sixty
17 percent of the gas that comes in our system
18 is purchased by somebody else and not
19 purchased by us. It's purchased by electric
20 generation customers, industrial customers.
21 So they buy gas all the way back in Texas and
22 move it across the interstate pipelines into
23 California and then have rights to move it
24 across our system.

25 Q And so with that, what has to
26 happen in order to start withdrawing gas from
27 Aliso during the incident?

28 A The key thing is you have to have a

1 demand sync for gas -- for somewhere for the
2 gas to go. That means you have to have a
3 demand profile less what is being delivered
4 across the interstates to be able to move
5 that gas. And also, it has to be --

6 MR. GRUEN: Your Honor, if I may -- I'm
7 sorry to interrupt.

8 ALJ HECHT: Go ahead.

9 MR. GRUEN: I have an objection that
10 this is new direct testimony. The
11 explanation -- we didn't ask questions about
12 gas going across interstate lines or where
13 the demand for it came from.

14 MS. PATEL: Your Honor, this goes
15 directly to Mr. Gruen's line of questioning
16 about why SoCalGas did not begin withdrawing
17 from the reservoir sooner than it did. The
18 system is part of why it could not withdraw
19 gas sooner.

20 ALJ HECHT: Mr. Gruen, do you have a
21 response?

22 MR. GRUEN: No response, your Honor. I
23 will stand on the objection but no response.

24 ALJ HECHT: Thank you.

25 I will note that several times over
26 the past couple of days witness Schwecke was
27 asked to keep his answers simple and that he
28 could do more explanation on redirect if

1 necessary. This relates to a line of
2 questioning and I'm going to let it go.

3 Ms. Patel, you may continue.

4 MS. PATEL: Thank you. You know, I
5 apologize to Mr. Schwecke. He's had his
6 response interrupted twice this afternoon.

7 Q I don't remember where you were,
8 Mr. Schwecke. You were explaining, I think,
9 what has to happen in order for you to start
10 withdrawing gas from the Aliso reservoir.

11 A Let me just -- it's a balance. All
12 right. You have gas coming into the
13 interstates, you have customer demand, so you
14 have to balance it on a daily basis and
15 utilize storage to balance it. So if you're
16 going to go on withdrawal at Aliso Canyon,
17 you have to have a demand sync that can use
18 that gas. You can't just put it into the
19 pipeline system. You have to use it. You
20 can't push it off into the interstates. Gas
21 doesn't flow in that direction. So it really
22 is a balance. If you have a certain amount
23 of gas that's being purchased by customers
24 based on their rights to do that to meet
25 their demand, you don't have a location.

26 We tried to maximize that as much
27 as possible to reduce the reservoir pressure
28 to the greatest extent possible as early as

1 we can. I think I mentioned in my previous
2 testimony we had to ensure the safety of the
3 field before we actually started the
4 withdrawals and the safety of the employees.

5 Q And at some point did the Energy
6 Division of the CPUC order you not to
7 completely deplete the reservoir?

8 A Yeah. You have to look at the time
9 frame. October -- our winter season, which
10 is a high-demand season, starts November 1st.
11 Typically our highest demands are in December
12 and January and maybe into February. So in
13 the January time frame, the CPUC Energy
14 Division -- I think it actually came from the
15 director, Simon -- was to stop our withdrawal
16 activity with the inventory level of 15 bcf
17 to ensure we had gas in Aliso Canyon for
18 reliability, and that reliability being
19 system reliability to deliver to the
20 customers.

21 Q All right. Thank you.

22 Mr. Moshfegh, could we please go to
23 Exhibit SED-219.

24 Mr. Schwecke, Mr. Gruen showed you
25 this exhibit, I believe, yesterday, but we
26 didn't really walk through who the people are
27 on this e-mail. Who were the persons who are
28 cc'd on this e-mail? We see that it's an

1 e-mail from Bret Lane to John Wright. Maybe
2 we can start with who John Wright is.

3 A All of these -- and we'll talk
4 about it -- know John Wright was an
5 individual that is a lot of experience in the
6 industry with a company called Wild Well
7 Control. He's one of the founders of that
8 company. Pete Slagel is another individual
9 that has a company called 1816 Drilling.

10 I think we've talked about Morten
11 from Add Energy and his expertise. Don
12 Shackelford is probably one of the most known
13 exotic kill designers for wells. Jim LeGrone
14 that shows he's from Boots & Coots, Rolly
15 Gomez from Boots & Coots, and Arash we've
16 talked a lot about. A lot of those
17 individuals actually had worked on the Gulf
18 coast incident, Macondo incident so they're
19 quite expensive. And then Wayne Courville is
20 another Boots & Coots individual that was
21 there for the relief well, and then we
22 mentioned Hilary.

23 Q Thank you. And were the National
24 Labs at Aliso at some point during the
25 incident?

26 A Yeah, the National Labs came in. I
27 think it was before the seventh well kill,
28 and we talked through and had a meeting with

1 Boots & Coots and the National Labs on what
2 the plans were for the seventh well kill.

3 Q And so with all these different
4 experts that you have at the field, did all
5 of these experts agree on an approach to kill
6 the well?

7 A Well, I think ultimately we ended
8 up with an agreed-upon plan, but there was
9 obviously different takes, different
10 thoughts. But ultimately, I think, we all
11 coalesced around what is the most appropriate
12 kill plan to perform.

13 Q And to the extent that there were
14 different thoughts or maybe even incomplete
15 information, was it due to the records that
16 were available?

17 A No, it wasn't due to the records
18 that we have. It was just based on different
19 assumptions or different thoughts. I mean
20 example in this e-mail, is there a 600-barrel
21 void? If there is, how does that change
22 things? Is the leak at, you know, 800 feet,
23 is it at 300 feet? How does that change
24 things?

25 So it wasn't necessarily -- it was
26 more about what is the current condition
27 because, again, we don't know what the
28 current condition on the well is because you

1 can't see it.

2 Q Okay. And you were asked yesterday
3 about what was going on -- and today about
4 what was going on at the field. What was
5 your primary objective during the
6 well-control operation?

7 A Our primary objective from the time
8 I got there, but even before the time I got
9 there, was to safely kill the well as soon as
10 possible. That was communicated to the
11 agencies, and it was impressed upon us by the
12 agencies to do that. So that was our primary
13 objective is to safely kill the well as soon
14 as possible. And I mean safely not only to
15 the people on-site, the well, but the entire
16 storage field. So that was our primary
17 objective.

18 Q And did SoCalGas do everything
19 possible, based on the information known at
20 the time, to realize this objective?

21 A I believe so. I think we took
22 extraordinary steps throughout the entire
23 event to, you know, achieve our objective,
24 which in incident command, it's your
25 commander's objective and that was to safely
26 kill the well.

27 I think all the things we did from,
28 you know, the well kills, to the bridge

1 to just everything we did, I'm just
2 thoroughly impressed. I mean I was there for
3 over 90 days and still think about it today,
4 but I look back and I am impressed. No one
5 got hurt that entire period of time.
6 Amazing.

7 We didn't have any ignition and
8 there was so many sources of potential
9 ignition from the time that F-4 plane flew
10 about 300 feet above the well because they
11 were doing an aerial mapping survey of the
12 methane. I mean at any given time there
13 could have been an incident, so I'm extremely
14 proud of the team that responded to the
15 incident.

16 Q All right. Thank you,
17 Mr. Schwecke.

18 Your Honor, that's all I have right
19 now.

20 ALJ HECHT: Thank you.

21 Do we have recross from any of the
22 parties or do you want a few minutes to
23 determine that?

24 Yes, Mr. Gruen.

25 MR. GRUEN: Yes, your Honor. May we
26 confer for a few minutes to determine the
27 answer to that question?

28 ALJ HECHT: Yes, let's do that.

1 We will take a 10-minute break
2 returning at 2:30. Thank you. We'll be off
3 the record.

4 (Off the record.)

5 (Brief recess.)

6 ALJ HECHT: We'll be back on the
7 record.

8 I will ask if SED has any recross
9 that's within the scope of that redirect?

10 MR. GRUEN: Yes, your Honor, we do.

11 ALJ HECHT: All right. Then please
12 proceed.

13 MR. GRUEN: Thank you, your Honor.

14 REXCROSS-EXAMINATION

15 BY MR. GRUEN:

16 Q Mr. Schwecke, if I may, before
17 Boots & Coots arrived on-site, did I
18 understand correctly on your redirect that
19 you shared an electronic copy of the well
20 file with Boots & Coots but that they
21 preferred to look at the hard copy?

22 A What I described is --
23 Boots & Coots was coming from Texas so while
24 they were on the plane, we sent them
25 electronic copy of the pertinent information
26 on the well file that they wanted to see to
27 bring them up to speed. And then when they
28 got on-site, they wanted to see the physical

1 hard copy of the well file.

2 Q Okay. And when you say you sent it
3 to them while they were on the plane, did you
4 e-mail it to them?

5 A I don't know how it was
6 communicated, whether it was e-mail, fax, I
7 don't know.

8 Q Okay. Good enough. And in order
9 to e-mail the electronic copy, you had to
10 scan all of the well file pages that you
11 shared with Boots & Coots; is that correct?

12 A Or we basically just faxed them. I
13 don't know, but it's -- you had to make a
14 copy of the documents in the well file.

15 Q From hard copy to electronic in
16 some fashion; correct?

17 A That's correct.

18 Q Turning to another point, do you
19 recall being asked about inspecting wells and
20 the program to do that by Ms. Patel?

21 A I don't recall specifically what
22 you're referencing, I'm sorry.

23 MS. PATEL: Your Honor, I'm going to
24 object here because that is clearly outside
25 the scope of my redirect.

26 MR. GRUEN: Okay. I can move on, your
27 Honor. It's not a concern.

28 ALJ HECHT: Thank you.

1 BY MR. GRUEN:

2 Q Let me just turn to another point.
3 You said that Well SS-25 was not flowing in
4 2007 if I understood your testimony.

5 Did I understand that correctly?

6 A Yes. When I reviewed the
7 transcript from Mr. Neville, the activity
8 that occurred in 2007, that well was not
9 flowing any gas. It was shut in at the
10 surface so to be able to set a plug at a
11 different circumstance when the well is
12 leaking like SS-25 was.

13 Q Okay. But just to clarify, the
14 SS-25, since it was shut in at the surface of
15 the well -- let me just clarify. That's, if
16 you will, at about the Christmas tree that's
17 at the top of the well is where it was shut
18 in. Is that approximately right?

19 A Yeah. In 2007 I think you're
20 referring to? Yes, it --

21 Q Correct.

22 A -- was shut in at the surface
23 valves.

24 Q Pardon me for talking over. Just
25 for the record, yes, 2007 is the time period
26 in which these questions relate. I
27 appreciate that. So just to clarify further,
28 at that -- during that 2007 time period that

1 we're discussing, the SS-25 tubing and casing
2 remained pressurized; is that correct?

3 A That is correct, at the --

4 Q Okay.

5 A -- same pressure.

6 Q Okay. And if I may, you answered
7 on redirect that no one was injured during
8 the incident; correct?

9 A That's my understanding, yes.

10 Q Are you aware that a lawsuit has
11 been brought against SoCalGas by those who
12 claim they've been injured as a result of the
13 111-day incident?

14 A I'm aware there's a lawsuit
15 pending. My reference was that -- to my
16 knowledge, no one on-site got injured during
17 the event.

18 Q Understood.

19 Your Honor, those are all the
20 questions we have on recross. Thank you.

21 ALJ HECHT: All right. Thank you.

22 Ms. Patel, anything further?

23 ALJ POIRIER: ALJ, I think --

24 MS. PATEL: Does Cal Advocates have
25 anything?

26 MS. MANDELBAUM: Yes, your Honor, we
27 do.

28 THE REPORTER: Excuse me, I couldn't

1 tell who that was.

2 MS. MANDELBAUM: This is Caryn
3 Mandelbaum. Thank you.

4 ALJ HECHT: Yes, go ahead. Do you
5 have -- I apologize. Do you have recross?

6 MS. MANDELBAUM: Briefly, your Honor.
7 Thank you.

8 ALJ HECHT: Go ahead.

9 RECCROSS-EXAMINATION

10 BY MS. MANDELBAUM:

11 Q Mr. Schwecke, do you recall
12 Ms. Patel asked you about your consideration
13 before relieving pressure in the oil field?

14 ALJ HECHT: I'm going to stop you right
15 there. You're kind of echoey and I fear that
16 might create a problem for our court
17 reporter. I don't know if it does. She is
18 nodding. Is there any way that you can use a
19 different microphone, headset, something that
20 will cut down on the echo?

21 MS. MANDELBAUM: I can try. Does this
22 help at all just holding the phone close to
23 my mouth?

24 ALJ HECHT: It helps. Looks like it's
25 not perfect, but we can try it.

26 MS. MANDELBAUM: Okay.

27 ALJ HECHT: All right. Then we can
28 continue.

1 MS. MANDELBAUM: Thank you.

2 Q Mr. Schwecke, do you recall
3 Ms. Patel asking you about your consideration
4 before relieving pressure from the oil field?

5 MS. PATEL: Objection, your Honor. I
6 think this question is vague, but it
7 certainly doesn't go -- I didn't ask any
8 questions about relieving pressure.

9 MS. MANDELBAUM: Your Honor, this had
10 to do with the extended pipeline and the
11 multiple customers that rely on gas and
12 balancing that pressure as one of the
13 considerations when killing the well.

14 ALJ HECHT: I will allow the question.
15 Please stay within the scope of redirect. Go
16 ahead.

17 BY MS. MANDELBAUM:

18 Q Mr. Schwecke, do you recall
19 Ms. Patel asking you about the consideration
20 you had in mind when balancing the pressure
21 of the pipeline and extended customers that
22 received gas from the gas field?

23 A Yeah, I recall that conversation.

24 Q And do you recall saying that the
25 safety of the personnel and the gas field
26 were one of the considerations?

27 A Yes. I said that in response to
28 Ms. Patel, but I think it was also part of my

1 testimony earlier that once the event
2 happened, we had to ensure that it was safe
3 to send employees out in the field to turn
4 the wells on.

5 We also had to be concerned that it
6 was safe with regard to the reservoir, that
7 nothing had happened within the reservoir,
8 that putting it on withdrawal may cause
9 additional problems. So that was the
10 reference to safety of the field, safety of
11 the employees. That was always paramount in
12 anything we did as it related to the
13 incident.

14 Q And do you recall having said that
15 the agencies implored you to safely kill the
16 well as soon as possible?

17 A Yes.

18 Q And when the agencies referred to
19 safety, were they also referring to the
20 neighboring communities?

21 A I do not know what they were
22 referring to. Their direction was for us to
23 kill the well.

24 Q And, Mr. Schwecke, when you were
25 considering the pressure and killing the
26 well, did you consider the safety of the
27 neighboring communities?

28 A I really don't understand the

1 question you're asking. I'm trying to
2 understand the safety of the community. We
3 were looking at safely killing the well.
4 When we were looking at withdrawal, we were
5 looking at safety of the facility, safety of
6 the employees, so I don't understand the
7 correlation you're making.

8 Q I'll ask it another way.
9 Mr. Schwecke, were you concerned that the
10 well could -- that the leak could harm the
11 health and safety of the neighboring
12 community?

13 MS. PATEL: Your Honor, I'm going to
14 object here. I don't really know what this
15 has to do with the balancing or withdrawal of
16 the reservoir question that we started here
17 with. That was supposed to be within the
18 scope of my redirect. This is way outside
19 the scope.

20 ALJ HECHT: Ms. Mandelbaum, can you
21 explain the relationship.

22 MS. MANDELBAUM: Your Honor, I'm trying
23 to understand the scope of safety that
24 SoCalGas took under consideration when trying
25 to kill the well.

26 ALJ HECHT: Ms. Patel?

27 MS. PATEL: I do not believe there have
28 been any violations alleged in this

1 proceeding that pertain to this line of
2 questioning.

3 ALJ HECHT: Is there any response to
4 that?

5 MS. MANDELBAUM: Your Honor, this goes
6 to the duty of care that SoCalGas and its
7 executives has in operating the well field.

8 ALJ HECHT: You can go ahead and ask
9 the questions and the witness can answer to
10 the best of his ability.

11 Yes, Ms. Patel.

12 MS. PATEL: I mean I think this duty of
13 care is -- it's a legal standard that no one
14 has established applies here. So, again, it
15 does not go to any of the violations that
16 have been alleged in this proceeding.

17 ALJ HECHT: That is a legal issue that
18 will be addressed in briefing. I will allow
19 the question and we will move on as quickly
20 as we can.

21 MS. MANDELBAUM: Thank you, your Honor.

22 Q Mr. Schwecke, my last question for
23 you is did you, when you were considering
24 safety, consider the health and safety of the
25 neighboring community as you responded to the
26 agencies' demands to safely kill the well as
27 soon as possible?

28 A I think when you look at the entire

1 incident and entire area, we are concerned
2 about the safety of the people on-site and
3 the health and safety of the community. You
4 can look at some of the actions we took
5 during that event such as proposing issues
6 with regard to an aerosol odorant killer and,
7 you know, it was ODEX.

8 We looked at putting mister pads
9 across the top of the well to try to knock
10 down the oil. We basically put and tested
11 out in the community air sampling. So that
12 was all part of our effort in considering not
13 only the safety on-site, but the entire
14 community that was potentially being impacted
15 by the event.

16 Q Thank you, Mr. Schwecke.

17 Those are all my questions.

18 ALJ HECHT: All right. Now I will go
19 back to Ms. Patel to whom I turned
20 prematurely earlier.

21 Anything further?

22 MS. PATEL: I do not, your Honor.

23 ALJ HECHT: All right. Then I think
24 that we are done with this witness. I want
25 to very much thank Mr. Schwecke for his time.
26 We will continue after a short break with
27 exhibits and then some housekeeping things
28 towards the end of the day.

1 I would like to take about a
2 seven-minute break. Before that, I will,
3 again, thank witness Schwecke and say I
4 believe you are excused.

5 THE WITNESS: Thank you, your Honor.

6 ALJ HECHT: Thank you.

7 We'll be off the record, back at
8 2:50.

9 (Off the record.)]

10 ALJ HECHT: We'll be back on the
11 record. We took a short break in which, I
12 believe, the parties put together their lists
13 of the exhibits that we addressed with this
14 witness, and I would like to start with
15 Ms. Patel.

16 MS. PATEL: Thank you, your Honor.

17 We actually reached out to SED and
18 obtained stipulations with respect to each
19 other's exhibits. You know, I apologize. I
20 responded to Ms. Purchia's e-mail, but not to
21 Cal Advocates. So Cal Advocates, I don't
22 know if you would agree to stipulate to
23 SoCalGas-02, which is the Prepared Opening
24 Testimony of Roger Schwecke, dated November
25 22, 2019; SoCalGas-23, which is the Prepared
26 Sur-Reply Testimony, and SoCalGas-24, which
27 is the Exhibits to the Prepared Sur-Reply
28 Testimony.

1 MS. MANDELBAUM: (Phoneline inaudible.)

2 (Interruption by reporter.)

3 ALJ HECHT: Let me call on
4 Ms. Mandelbaum again and ask that you hold
5 your phone up closer so that it will be
6 clearer. The question was whether Public
7 Advocates office will stipulate to the
8 SoCalGas exhibits and you can provide your
9 response, and then we'll go back to
10 Ms. Patel.

11 Please, go ahead.

12 MS. MANDELBAUM: On behalf of Cal
13 Advocates, we stipulate to the exhibits
14 Ms. Patel would like to enter into the
15 record.

16 ALJ HECHT: All right. Thank you.

17 Ms. Patel, I'm going to have you
18 repeat those exhibit numbers and the names.
19 I don't think that there were too many of
20 them. We have a stipulation so they can be
21 marked and identified and entered.

22 MS. PATEL: They are SoCalGas-02, the
23 Prepared Opening Testimony of Roger Schwecke,
24 dated November 22nd, 2019; SoCalGas-23, the
25 Prepared Sur-Reply Testimony of Roger
26 Schwecke, dated June 30th, 2020, and
27 SoCalGas-24, the Exhibits to the Prepared
28 Sur-Reply testimony of Roger Schwecke, also

1 dated June 30th, 2020.

2 ALJ HECHT: All right. Thank you.

3 Unless there's any objection, and I
4 don't think that there is because they
5 stipulated, we're going to mark and identify
6 SoCalGas Exhibits 2, 23 and 24 and enter them
7 into the record of the proceeding. Any
8 objections state it now.

9 (No response.)

10 (Exhibit No. SoCalGas-02 was marked
11 for identification.)

12 (Exhibit No. SoCalGas-23 was marked
13 for identification.)

14 (Exhibit No. SoCalGas-24 was marked
15 for identification.)

16 (Exhibit No. SoCalGas-02 was
17 received into evidence.)

18 (Exhibit No. SoCalGas-23 was
19 received into evidence.)

20 (Exhibit No. SoCalGas-24 was
21 received into evidence.)

22 ALJ HECHT: Okay. Seeing none. We
23 will move on. Then I think that we will go
24 to SED, followed by Public Advocates Office.

25 Ms. Purchia I believe you're up.

26 MS. PURCHIA: Thank you, your Honor.

27 As Ms. Patel indicated, we have
28 stipulated to each other's exhibits, and we
have quite a few exhibits to read it. Would
it make sense to read them slowly just by
number or would you like us to also identify

1 the name?

2 ALJ HECHT: I think they were all
3 identified by name during the
4 cross-examination today; is that correct?

5 MS. PURCHIA: I don't believe that they
6 were all copied in, the name of the caption
7 was identified for each exhibit, but we do
8 have a cover page on each exhibit that
9 provides the title.

10 ALJ HECHT: Okay. Go ahead reading the
11 numbers slowly, and we will keep a record.

12 MS. PURCHIA: Okay. We have SED-218,
13 SED-219, SED-258, SED-276, SED-281, SED-310;
14 SED-312, SED-313, SED-314, SED-315, SED-316,
15 SED-317, SED-318, SED-319, SED-320, SED-321,
16 SED-322 and SED-323, and we would request to
17 move these all into the record.

18 ALJ HECHT: Thank you.

19 And I believe that you said that you
20 have stipulated to one another's exhibits.

21 Can Ms. Patel please confirm that.

22 MS. PATEL: That's correct, your Honor.
23 SoCalGas stipulates to the entry of those
24 exhibits.

25 ALJ HECHT: Then we'll mark and
26 identify SED Exhibits 218, 219, 258, 276,
27 281, 310, 312, 313, 314, 315, 316, 317, 318,
28 319, 320, 321, 322 and 323.

1 I think that that covers everything
2 there. So those are marked and identified
3 and since there is no objection, we will move
4 them into the record.

5 MS. PURCHIA: Thank you.

6 ALJ HECHT: Thank you.

7 (Exhibit No. SED-218 was marked for
8 identification.)

9 (Exhibit No. SED-219 was marked for
10 identification.)

11 (Exhibit No. SED-258 was marked for
12 identification.)

13 (Exhibit No. SED-276 was marked for
14 identification.)

15 (Exhibit No. SED-281 was marked for
16 identification.)

17 (Exhibit No. SED-310 was marked for
18 identification.)

19 (Exhibit No. SED-312 to SED-323 was
20 marked for identification.)

21 (Exhibit No. SED-218 was received
22 into evidence.)

23 (Exhibit No. SED-219 was received
24 into evidence.)

25 (Exhibit No. SED-258 was received
26 into evidence.)

27 (Exhibit No. SED-276 was received
28 into evidence.)

(Exhibit No. SED-281 was received
into evidence.)

(Exhibit No. SED-310 was received
into evidence.)

(Exhibit Nos. SED-312 to SED-323
were received into evidence.)

ALJ HECHT: I believe that the only

1 exhibits that the Public Advocates Office
2 referred to were from other parties, and that
3 there weren't any cross-exhibits from CalPA;
4 is that correct?

5 MS. MANDELBAUM: That is correct, your
6 Honor.

7 ALJ HECHT: Okay. So I think that
8 addresses the exhibits. So, now, I will ask
9 if there are housekeeping matters for us to
10 consider today. Do people want to take a
11 short break before we do that. I would
12 prefer to go ahead if we can since we've had
13 two recent breaks. I'm seeing some nodding
14 and no shaking of heads, so I'll just
15 continue. Thank you.

16 Mr. Stoddard, I saw you raise your
17 hand.

18 MR. STODDARD: Thank you, your Honor.

19 Yes. There are a few housekeeping
20 items, some of which I expect are fairly
21 minor, and may need to be dealt with later,
22 but the two that were deferred, which I
23 raised, I believe, this morning related to
24 our request to call back Cal Advocates
25 witnesses as well as to compel production of
26 the remaining notes that are responsive to
27 the discovery that we were permitted over the
28 hiatus related to the meetings between Cal

1 Advocates and Blade that occurred in October
2 of 2019, so that's the first item.

3 I'm asking for guidance to whether
4 we want to discuss that now or whether your
5 Honors prefer to deal with it separately.

6 ALJ HECHT: We can discuss that now.

7 Do we have comments from SED and/or
8 Public Advocates Office.

9 MS. MANDELBAUM: Yes, your Honor. I
10 know that my co-counsel, Traci Bone, would
11 like to speak on this matter. She is not
12 available this afternoon; so I would request
13 that we speak about it tomorrow morning. If
14 that is not amenable for your schedules, I am
15 prepared to speak about this matter.

16 ALJ HECHT: I would prefer if you
17 address it today, and I don't think it should
18 be problematic to do that. I will call on
19 Mr. Gruen, and then we'll get back to
20 Ms. Mandelbaum.

21 Mr. Gruen.

22 MR. GRUEN: Your Honor, just noting
23 that -- I believe the other matter that
24 Mr. Stoddard raised pertains to SED and I
25 would note that SED focus in preparing --
26 focused on cross-examination on hearings. So
27 what we have here is a disparity in
28 preparation, where Mr. Stoddard is, I

1 believe, prepared to offer to you -- make
2 certain arguments that pertain to the
3 deposition of Mr. Holter, while SED has
4 focused and concentrated on
5 cross-examination.

6 And so that we have an opportunity
7 to -- and I'm basing this on issues he raised
8 this morning. So that we have an opportunity
9 to prepare and think through the issues -- I
10 believe he mentioned relevant to
11 communications. I would ask that we have a
12 status conference, perhaps, tomorrow just to
13 give SED an opportunity to adjust and think
14 about the issues so that we can be prepared
15 for argument.

16 ALJ HECHT: I would like to address one
17 issue at a time. So I'm going to put that on
18 hold and stay with the issue of the Public
19 Advocates Office witness. Is there a
20 response on that from Mr. Stoddard?

21 MR. STODDARD: Not --

22 ALJ HECHT: Let me put it this way: Is
23 there anything new that has not already been
24 argued about this issue.

25 MR. STODDARD: Your Honor, I think my
26 understanding was that Cal Advocates wanted
27 to provide a response when we last discussed
28 this, but they were in the course of

1 preparing for their cross-examination, and I
2 think it was contemplated at the time that
3 this was going to be addressed yesterday, but
4 they haven't.

5 So I think at this point, we're
6 ready just, you know, to hear a decision from
7 your Honors as to whether or not we're
8 permitted to call back their witnesses.

9 Again, it would be extremely
10 limited, and I don't need to repeat the
11 arguments I presented previously if your
12 Honors have reviewed them and are familiar
13 with them. The only point of clarification
14 would be, again, two separate issues: One of
15 them is calling back their witnesses, and the
16 other one is getting the complete production
17 of their notes.

18 ALJ HECHT: And, I believe,
19 Ms. Mandelbaum said she wanted to speak.
20 Could you please do that now.

21 MS. MANDELBAUM: Your Honors, thank
22 you. Cal Advocates has given a lot of
23 thought to this pressing discovery and I've
24 been authorized to share several thoughts
25 about this. As an initial matter, Cal
26 Advocates believes it's already gone beyond
27 the call of duty in responding to SoCalGas's
28 data requests. We responded to four data

1 requests that were sent by e-mail and then a
2 follow-up e-mail with additional questions.

3 We participated in a meet and confer
4 regarding that follow-up e-mail; so,
5 essentially, we have responded to six data
6 requests about this particular issue.

7 And SoCalGas now makes two claims to
8 support its demand that it be permitted to
9 recross Mr. Holzschuh and Mr. Taul as well as
10 receive the remaining notes from their calls.

11 First, notwithstanding the fact,
12 that we have already confirmed in writing
13 twice that the notes jotted down on the
14 handwritten notes that were already produced
15 to them were nonresponsive.

16 SoCalGas insists, essentially, they
17 must receive these notes, suggesting that we
18 are lying to them, and we've already offered
19 to produce those notes in camera to your
20 Honors, and you can determine, if you wish,
21 whether those notes are responsive or not.

22 We observed that they were not
23 responsive. Notwithstanding that fact, Cal
24 Advocates does not support continuing down
25 this path of discovery because we believe
26 that this is only going to lead to further
27 unreasonable demands from SoCalGas and their
28 counsel.

1 We note that Cal Advocates is not
2 the party under investigation here. Cal
3 Advocates posits that SoCalGas's demands for
4 these notes are nothing more than a
5 distraction from what the real case is here,
6 which is thousands of residents in Porter
7 Ranch had to flee their homes because of the
8 largest gas leak in the United States.

9 Second, SoCalGas claims that Cal
10 Advocates violated your Honors scoping memo
11 dated on September 26, 2019.

12 ALJ HECHT: I'm going to interrupt you
13 there. I think we discussed this previously,
14 and unless there is something new that
15 Ms. Bone did not already say about that, I
16 would like to move on, get any last
17 statements, and resolve this.

18 MS. MANDELBAUM: Your Honor, we had put
19 our witnesses up for cross-examination and
20 Mr. Lotterman and Mr. Stoddard had extensive
21 questions for SoCalGas's witness. They
22 responded to those questions expressing that
23 beyond what their notes had provided and what
24 they recalled, they had no further testimony
25 to provide regarding these two phone calls
26 with Blade and I would be happy to provide
27 you with cites to Mr. Lotterman's questions
28 in the transcript where he went on at length

1 asking our witnesses about these particular
2 conversations.

3 I would be happy to, again, provide
4 the notes that have already been provided to
5 all of the parties from those conversations.
6 Those conversations led to data requests, and
7 those data requests were provided to all
8 parties.

9 So the question really is: Why does
10 SoCalGas continue to press this issue? We
11 urge your Honors to limit the scope of this
12 discovery at this point so as to stop the
13 waste of Cal Advocates and the Commission's
14 staff's time. We can only speculate about
15 further goals of SoCalGas and their
16 attorneys --

17 ALJ HECHT: Do not speculate, please.
18 Let's just continue. Finish what you want to
19 say and move on.

20 MS. MANDELBAUM: So, your Honor, we
21 would be happy -- again, though we think it's
22 ill-advised to press this issue -- but we
23 would be happy to provide the back side of
24 those notes to your Honors in camera, and you
25 can decide whether they are responsive or
26 not.

27 We can ask our witnesses to come
28 back to the stand. Again, we believe that

1 this would be a waste of time and resources,
2 and we would have to consider their
3 schedules.

4 We know that Mr. Taul may be
5 available in the near term; Mr. Holzschuh --

6 ALJ HECHT: This is very premature to
7 be having that discussion as we have not in
8 fact ruled on this.

9 So, again, do you have something to
10 add that is relevant to the bottom line
11 question?

12 MS. MANDELBAUM: Your Honor, I've added
13 all that I have.

14 ALJ HECHT: Is there any quick
15 response? And I mean quick. I saw
16 Mr. Stoddard and then Mr. Gruen.

17 MR. STODDARD: Thank you, your Honor.

18 First on the responsiveness and the
19 in camera review, as I noted last time,
20 SoCalGas would not object to in camera
21 review; however, given that the issue here is
22 just responsiveness, frankly, and shouldn't
23 even be necessary, Cal Advocates could simply
24 produce the notes to us and we can determine
25 the relevance.

26 Importantly, they have not asserted
27 or claimed any privilege here. Typically, in
28 camera review is preserved for reviews of

1 privilege claims. In this instance, they
2 have not claimed privilege.

3 Separately, in terms of why we might
4 want to recall these witnesses despite the
5 fact that we've already cross-examined them,
6 including in part about the conversations
7 they had with Blade, which is what -- and
8 their answers are what led to the discovery.

9 The notes that we've discovered had
10 information that we didn't have at that time,
11 and it includes some notations that we would
12 like to ask questions about, including, for
13 example, a note that states -- and this is in
14 the Cal Advocates notes:

15 Previously, we were trying to find
16 all the ways we could find
17 SoCalGas could have been at fault.
18 Now, we are just focusing on the
19 least circumstantial point.

20 We would like to ask questions about
21 the context of that notation. There's also
22 notes about the "Blade, not judgment." We'd
23 like to ask questions about the context of
24 that notation. There's notations related to
25 conversations with Mr. Krishnamurthy related
26 to SoCalGas's knowledge of groundwater. We
27 would like to ask questions about that issue.

28 But, again, you know, that's a

1 separate issue from simply getting a complete
2 response to our existing data request, and
3 although we have had meet and confers and
4 multiple rounds of discovery here, that
5 doesn't relieve Cal Advocates of their
6 obligation to provide complete responses to
7 the data requests we've already sent them.

8 And, again, I can see through the
9 page. So I know that it's -- I know that the
10 Cal Advocates' statement that it is not
11 responsive to our request and is not relevant
12 to this proceeding, which is what they've
13 said, is simply not true. And I don't want
14 to accuse anybody of lying. It could be a
15 mistake. It's just simply not true.]

16 MS. MANDELBAUM: Your Honor, if I may
17 respond?

18 ALJ HECHT: Yes.

19 MS. MANDELBAUM: Mr. Stoddard
20 mischaracterizes that notes on the back of
21 the page, as you may have seen, these were
22 handwritten notes on paper, and yes, there is
23 some transparency, you can see writing on the
24 back of the page, but our analyst has
25 testified to the fact that those notes were
26 from other meetings not relevant to this
27 proceeding. They have also testified as
28 witnesses that the notes we provided and

1 their testimony cover the extent of their
2 knowledge regarding those two conversations
3 with Blade.

4 ALJ HECHT: Thank you. We're going to
5 resolve this. I have conferred with ALJ
6 Poirier. We do not think it would be useful
7 to recall these witnesses, and we are not
8 going to compel responses at this time. I am
9 not making assumptions that anybody is lying.
10 And I think I have asked before and I will
11 ask again that people not attribute
12 motivation to one another, please.

13 Any questions before we move on to
14 the next issue, which I am guessing is going
15 to relate to Mr. Holter?

16 Mr. Stoddard.

17 MR. STODDARD: Yes, your Honor. If we
18 are not permitted to recall the witnesses,
19 would we -- could we ask for entry of the
20 notes that we've received into the record as
21 an exhibit?

22 ALJ HECHT: Why don't you meet and
23 confer with the Public Advocates Office about
24 that and if we have a status conference, we
25 can discuss it at that point or if people
26 want to bring a motion for that, that can be
27 done, but that is not something we're going
28 to do here.

1 MR. STODDARD: Okay. Thank you, your
2 Honor.

3 And then separately, I understand
4 you're not compelling production of the notes
5 at this time; however, will your Honors take
6 the notes in for in camera review just to
7 determine responsiveness?

8 ALJ HECHT: No, not at this time. I
9 think we're going to move on.

10 Any other comments or questions?

11 (No response.)

12 ALJ HECHT: Okay. Thank you. We will
13 continue with the next issue that was raised
14 this morning, and I think that was
15 Mr. Holter, and then we can continue with
16 whatever other housekeeping issues we need to
17 address.

18 MR. STODDARD: Yes, your Honor, thank
19 you. And this relates simply to the timing.
20 We have agreed on a tentative date for the
21 deposition for Mr. Holter in June, provided
22 that we get a document production in time,
23 you know, again at least five days in advance
24 of that deposition. The issue that we argued
25 last week related to the scope of that
26 document production, and, again, I am not
27 going to reargue it. I understand that we've
28 already presented our case, but just briefly,

1 again, we, you know -- documents are critical
2 to a deposition, and in this instance, the
3 scope of the request was all documents in
4 Mr. Holter's possession related to the
5 incident.

6 And SED -- again, SED I understand
7 has started work on collection potentially of
8 notes and photographs, however has objected,
9 you know, through the argument presented last
10 week, to any sort of communications without a
11 clear basis for doing so, aside from burden.

12 ALJ HECHT: Is there anything, again,
13 new that somebody can add to this now? I
14 will let you know that we do not plan on
15 ruling on this today. We will provide
16 written guidance in the near future. It
17 would be helpful to know when that deposition
18 is planned for so that we have those dates in
19 mind.

20 So when are you hoping to have that
21 deposition and are there anything that
22 anybody would like to add that have not been
23 discussed as yet?

24 Mr. Gruen.

25 MR. GRUEN: Your Honor, if I may. My
26 understanding, we will do our best to see if
27 we can resolve this or at least provide the
28 information and inform your Honors on this.

1 So my understanding of the tentative
2 date with a number of provisos is June 10th.
3 And that is with the understanding that we
4 are able to provide the notes and redact them
5 for privilege as we discussed last time, as
6 well as the photos. And when we say "notes,"
7 we had mentioned there are a specific set of
8 field notes.

9 The other piece about this that we
10 understand is -- is just the -- we understand
11 that SoCalGas has asked for the production of
12 communications as well. We wanted to clarify
13 if that is indeed SoCalGas' request. I had
14 understood initially it was.

15 MR. STODDARD: That's correct.

16 MR. GRUEN: So with that understanding,
17 just to clarify, what that is asking of SED
18 that Mr. Holter's communications would
19 include communications with all SED personnel
20 working -- that worked at the Aliso facility,
21 as well as management at the Commission.
22 That's the breadth of an unqualified
23 definition of communications; in data
24 responses that SED has provided to SoCalGas,
25 SED has worked to provide SoCalGas with a
26 complete list of SED personnel to date that
27 worked, related to the Aliso incident. It's
28 been burdensome to obtain a complete list of

1 personnel for several reasons, just the
2 personnel. And first, the first one is many
3 personnel for SED have left since SED's
4 pre-formal investigation.

5 ALJ HECHT: I'm not clear how this
6 relates to the question of the document
7 production. If you could clarify that, that
8 would be helpful. Otherwise, I would like to
9 move on.

10 MR. GRUEN: It makes it difficult to
11 gather the data poles of all of the
12 communications between Mr. Holter and all of
13 the individuals, and by our estimate is about
14 30. So you have 30 communications
15 back-and-forth, times the amount of time that
16 SED, Mr. Holter and others were working on
17 the case. So this is -- potentially we're
18 talking about it's over many years. It would
19 take time for us to review all of those
20 communications to assess which ones are
21 responsive.

22 ALJ HECHT: I think that you have made
23 your point. Please, you do not need to go
24 through that any more. In fact, we'll be off
25 the record.

26 (Off the record.)

27 ALJ HECHT: We'll be back on the
28 record.

1 While we were off the record, I
2 discussed that we do not need to have
3 arguments that have already been made
4 repeated.

5 So I am going to ask if there is
6 anything new from either party, starting with
7 Mr. Gruen, and then we will, as I said
8 earlier, take this under advisement and
9 provide guidance in writing, specifically
10 about those documents. That advice will be
11 provided I expect in the near future and we
12 will certainly endeavor to do so in time for
13 document production, understanding that that
14 requires pulling whatever records they are,
15 potentially redacting them, turning them
16 over, examining them, preparing for a
17 deposition and having them five days before a
18 deposition. Is there any part of that that I
19 am missing?

20 MR. GRUEN: No, your Honor.

21 ALJ HECHT: Thank you. All right. Any
22 other comments on this before we take it
23 under advisement?

24 MR. STODDARD: Not from me, your Honor.

25 ALJ HECHT: Okay. Thank you. With
26 that, we will provide that guidance as soon
27 as we can. And I will ask what, if any,
28 other housekeeping issues there are to

1 address today.

2 Yes, Mr. Stoddard and then
3 Mr. Gruen.

4 MR. STODDARD: Thank you, your Honor.
5 And this one hopefully should be
6 noncontroversial.

7 We would just request leave to tie
8 up a few loose ends from hearing following
9 today, including related to I think there
10 were a few exhibits, especially early on in
11 the proceeding, where there may have been
12 outstanding rulings on entries of motion --
13 entry of exhibits, and your Honors indicated
14 a preference to defer it to a later date,
15 circle back. And we just want to confirm
16 that that occurred or address it if it didn't
17 occur.

18 And another item I believe here
19 where I have this concern has to do with the
20 admission of Mr. Carnahan's testimony as an
21 exhibit where cross-examination of him was
22 waived. Again, I don't think that should be
23 controversial and we will discuss with the
24 parties as to a stipulation, but if we can
25 deal with minor housekeeping like that
26 separately following hearings, that might be
27 best.

28 ALJ HECHT: Are there any thoughts on

1 that or concerns?

2 Mr. Gruen.

3 MR. GRUEN: Your Honor, we can talk
4 with SoCalGas offline about that.

5 ALJ HECHT: Okay. That would be great.
6 I thought that we had addressed the
7 outstanding exhibits, but it's possible that
8 we didn't. If we didn't, yes, please bring
9 that to our attention and we will address it,
10 similarly was Mr. Carnahan's, whose cross was
11 waived. Yes. All right. I think that's it
12 for that, unless there are any other
13 questions. No.

14 MR. GRUEN: Not on that, your Honor,
15 no.

16 ALJ HECHT: Okay. Mr. Gruen.

17 MR. GRUEN: Your Honor, this is
18 flagging for the record in light of the
19 evidence that was introduced that SED will be
20 making a motion as soon as we can to add a
21 violation, namely the gist of the violation
22 that we would add is that in violation of
23 California Public Utilities Code Section 451
24 Southern California Gas Company knew the
25 Aliso Canyon Natural Gas Storage Facility
26 Well SS-25 could not be top killed and that a
27 relief well would be necessary to control it
28 dating back to the date of Mr. Mansdorfer's

1 e-mail from April 23rd, 2009 to October 23rd,
2 2015.

3 There is a safety concern here.
4 We'll elaborate on it, but just to flag it
5 for the record, the safety concern that
6 SoCalGas is operating with knowledge that in
7 the event of a blowout that they couldn't top
8 kill a well like SS-25 and would need to do a
9 relief well and that they continued to
10 operate a well like SS-25 anyways after being
11 warned that an event like SS-25 could happen.

12 There is a safety concern that SED
13 feels duty-bound to raise and the concern is
14 --

15 ALJ HECHT: This is not I think the
16 time to raise the substance of that. You
17 have notified us that you plan --

18 MR. GRUEN: Understood.

19 ALJ HECHT: -- to bring a motion. I
20 don't feel like I am in any position to
21 address that now and I don't feel like I want
22 to ask other parties to respond to it now.
23 If you plan to bring a written motion, please
24 bring that written motion.

25 MR. GRUEN: Understood, your Honor.

26 ALJ HECHT: Thank you. All right. Are
27 there any other housekeeping issues that we
28 should deal with before we leave, other than

1 the question of briefing that I planned to
2 bring up in a moment?

3 MR. STODDARD: None here, your Honor.

4 ALJ HECHT: Seeing none, I looked back
5 at the scoping memo. The scoping memo gave
6 seven weeks after the end of hearings for
7 opening briefs and another five past that for
8 reply briefs. We aren't completely at the
9 end of our process right now, given the
10 issues with Mr. Holter. So I don't feel like
11 we are in a position to actually set a
12 specific date. But I wanted to acknowledge
13 that and get back to it and say, under the
14 circumstances, I expect that opening briefs
15 couldn't really be due before early July
16 because that is kind of the time frame that
17 would have been allowed originally, and given
18 everything that is going on, we would give it
19 at least that amount of time for now, and we
20 will try to get you a date for briefing once
21 we know what other process, if any, there is,
22 and it sounds to me like that is not going to
23 happen until after June 10th.

24 ALJ POIRIER: ALJ Hecht, this is ALJ
25 Poirier.

26 ALJ HECHT: Yes, please.

27 ALJ POIRIER: I want to make sure, too,
28 that we still have the outstanding

1 disposition on Boots & Coots that we'll be
2 waiting on to see, and I'd ask that SoCalGas
3 keep us apprised of the situation by sending
4 updates to the service list. So I think I
5 just wanted to make sure that that is the
6 other big piece of how we're going to handle
7 that.

8 ALJ HECHT: Yes. Thank you. Yes.
9 Thank you for bringing that up.

10 Are there any questions about the
11 briefing schedule or current lack of one?

12 (No response.)

13 ALJ HECHT: Okay. I'm not seeing any
14 questions about that. Okay. I just wanted
15 to give you that heads up that it's not an
16 oversight that we haven't set it. It's based
17 on there still being things outstanding.

18 Yes, Mr. Gruen.

19 MR. GRUEN: Your Honor, and I wonder
20 and I appreciate the question, the point that
21 ALJ Poirier raised about Boots & Coots, is
22 there an update at this time about the timing
23 in which the court in Texas will reach a
24 decision as to whether Boots & Coots will be
25 required to testify?

26 ALJ HECHT: I believe that the last we
27 heard there was a hearing scheduled for --
28 was it June 1st? And so I did not expect to

1 hear before then, but maybe I am
2 misremembering.

3 MR. STODDARD: You're correct, your
4 Honor, that that was the date. Since that, I
5 believe that was yesterday, I am forgetting,
6 but the court has now moved the hearing date
7 to June 3rd, but the expectation is, is that
8 we would get a ruling at that hearing.

9 ALJ HECHT: All right. Thank you.
10 That gives us a timeline for getting a
11 response on that. Obviously, there will be
12 more process to figure out what to do,
13 whether or not the Boots & Coots witnesses
14 can come, either setting a date for them to
15 appear at hearings or addressing their
16 testimony and how to deal with that.

17 I think that we'll wait and we'll
18 have a status conference of some kind once we
19 have more of this information.

20 Judge Poirier, does that make sense
21 to you?

22 ALJ POIRIER: Yeah, it does. I think
23 once we have more information, a status
24 conference might be the way to go to address
25 that and any other issues.

26 ALJ HECHT: Great. So we can all plan
27 on likely having a status conference sometime
28 after June 3rd. Possibly it would wait until

1 after the date of the deposition of
2 Mr. Holter, but I don't know.

3 All right. Juge Poirier, do you
4 have anything else to add?

5 ALJ POIRIER: No. That's all for me.
6 Thank you.

7 ALJ HECHT: Okay. It's 3:30. I think
8 we are getting towards the end of today. My
9 take on this is that we do not need to have
10 hearings tomorrow because we have completed
11 the witnesses that are available now.

12 Does anybody have any alternative
13 view on that or any concerns about leaving
14 this and planning to have a status conference
15 in a couple of weeks?

16 MR. GRUEN: No, your Honor. From SED,
17 I think that's right.

18 MR. STODDARD: No, your Honor.
19 SoCalGas also thinks it makes sense to have a
20 status conference in a couple of weeks to
21 review these items.

22 ALJ HECHT: Okay. Thank you. Are
23 there any other -- then I think we can
24 adjourn these hearings for the time being,
25 knowing that we may be coming back for the
26 Boots & Coots witnesses or not, but at least
27 we will have a status conference about it.

28 Are there any other issues before we

1 adjourn for this set of hearings, pending
2 that status conference?

3 MS. PATEL: No, your Honor. Thank you.

4 MR. GRUEN: Not at this time, your
5 Honor, from SED. Thank you. No.

6 MS. MANDELBAUM: No.

7 ALJ HECHT: I see Mr. Stoddard shaking
8 his head, so I am going to take it that all
9 of the active parties have said no.

10 With that, Judge Poirier, one more
11 time, anything to add before we adjourn?

12 ALJ POIRIER: No. Just thank you to
13 all the parties and the staff that have
14 supported the hearings and thanks again.

15 ALJ HECHT: And I will reiterate that
16 our staff has done a very good job under
17 difficult circumstances and with resource
18 constraints. I appreciate all of their work
19 and I appreciate all of the work that all of
20 you have done that must have gone into
21 preparing this.

22 So thank you very much for your time
23 and I am sure that we will see you again at
24 the status conference in the not too distant
25 future.

26 Thank you.

27 We are adjourned. We'll be off the
28 record.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

(Off the record.)

(Whereupon, at the hour of 3:30
p.m., this matter having concluded, the
Commission then adjourned.)]

* * * * *

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE
STATE OF CALIFORNIA

CERTIFICATION OF TRANSCRIPT OF PROCEEDING
I, ANDREA L. ROSS, CERTIFIED SHORTHAND REPORTER
NO. 7896, IN AND FOR THE STATE OF CALIFORNIA, DO
HEREBY CERTIFY THAT THE PAGES OF THIS TRANSCRIPT
PREPARED BY ME COMPRISE A FULL, TRUE, AND CORRECT
TRANSCRIPT OF THE TESTIMONY AND PROCEEDINGS HELD IN
THIS MATTER ON MAY 19, 2021.

I FURTHER CERTIFY THAT I HAVE NO INTEREST IN THE
EVENTS OF THE MATTER OR THE OUTCOME OF THE PROCEEDING.

EXECUTED THIS MAY 26, 2021.



ANDREA L. ROSS
CSR NO. 7896

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE
STATE OF CALIFORNIA

CERTIFICATION OF TRANSCRIPT OF PROCEEDING
I, CAROL ANN MENDEZ, CERTIFIED SHORTHAND REPORTER
NO. 4330, IN AND FOR THE STATE OF CALIFORNIA, DO
HEREBY CERTIFY THAT THE PAGES OF THIS TRANSCRIPT
PREPARED BY ME COMPRISE A FULL, TRUE, AND CORRECT
TRANSCRIPT OF THE TESTIMONY AND PROCEEDINGS HELD IN
THIS MATTER ON MAY 19, 2021.

I FURTHER CERTIFY THAT I HAVE NO INTEREST IN THE
EVENTS OF THE MATTER OR THE OUTCOME OF THE PROCEEDING.

EXECUTED THIS MAY 26, 2021.


CAROL ANN MENDEZ
CSR NO. 4330

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE
STATE OF CALIFORNIA

CERTIFICATION OF TRANSCRIPT OF PROCEEDING
I, SHANNON ROSS, CERTIFIED SHORTHAND REPORTER
NO. 8916, IN AND FOR THE STATE OF CALIFORNIA, DO
HEREBY CERTIFY THAT THE PAGES OF THIS TRANSCRIPT
PREPARED BY ME COMPRISE A FULL, TRUE, AND CORRECT
TRANSCRIPT OF THE TESTIMONY AND PROCEEDINGS HELD IN
THIS MATTER ON MAY 19, 2021.

I FURTHER CERTIFY THAT I HAVE NO INTEREST IN THE
EVENTS OF THE MATTER OR THE OUTCOME OF THE PROCEEDING.
EXECUTED THIS MAY 26, 2021.


SHANNON ROSS
CSR NO. 8916

<u>0</u>	<u>2</u>	258 2902:26	36H 2811:4
05 2805:7	2 2868:13 2901:6	25th 2823:2	37 2835:6
06 2805:7	2-7/8-inch 2847:13	26 2787:1 2909:11	<u>4</u>
07 2805:7	20 2804:26 2805:13 2867:16	27 2800:14 2810:26 2878:16	4 2862:14
<u>1</u>	2007 2786:11 2851:12, 15 2852:2 2891:4,8,19, 25,28	276 2902:26	451 2921:23
1 2789:11	2009 2812:20 2861:13, 23 2865:4 2922:1	281 2902:27	4:07 2800:14
10 2816:22,24	2011 2812:28 2814:15 2861:20	2:05 2877:9	<u>5</u>
10-minute 2889:1	2012 2863:28 2864:2,4	2:30 2889:2	5 2786:27
100 2798:14	2013 2807:17 2808:14, 19 2809:7,23	2:50 2899:8	5th 2811:14 2813:2 2850:26
1000 2835:3 2852:20	2014 2866:16	<u>3</u>	<u>6</u>
10:00 2785:2	2015 2787:26 2788:18 2791:3,14 2800:14 2804:26 2815:19 2867:16 2878:16 2880:23 2922:2	3 2868:24	6 2802:12 2803:14,26 2869:22
10:30 2801:26	2016 2802:12 2803:14, 19 2866:16	30 2918:14	600-barrel 2886:20
10th 2917:2 2923:23	2019 2899:25 2900:24 2905:2 2909:11	300 2879:27 2886:23 2888:10	<u>7</u>
11 2791:14 2880:23	2020 2900:26 2901:1	300-foot 2849:28 2853:20	6 2802:12 2803:14,26 2869:22
111-day 2822:12 2892:13	2021 2785:2 2786:27	30th 2900:26 2901:1	7
11:00 2836:15	2033 2786:27	310 2902:27	7-inch 2847:13
11:05 2814:27	2055 2787:1	312 2902:27	79 2848:4
11:30 2836:15	20th 2867:26	313 2902:27	<u>8</u>
11:34 2833:18	2173 2786:28	314 2902:27	80 2848:4
11th 2868:12	218 2800:3 2902:26	315 2865:19 2902:27	800 2879:26 2886:22
12 2793:12	219 2902:26	316 2902:27	890 2854:9 2869:25 2870:2
12:50 2833:4,15	22 2808:14 2899:25	316.012 2811:3	<u>9</u>
12:52 2833:18 2834:1	22nd 2900:24	317 2861:12 2902:27	9 2789:1,10 2821:12
13th 2842:19	23 2808:19 2901:6	318 2902:27	90 2822:11 2888:3
15 2786:28 2884:16	23rd 2807:17 2809:7,23 2812:20 2922:1	319 2902:28	9:30 2861:4
15-minute 2814:26	24 2787:26 2788:18 2791:2 2815:19 2901:6	320 2902:28	9:33 2791:2
150 2821:13		320 2902:28	<u>A</u>
16 2803:18		3208 2812:8	a.m. 2785:2 2789:1,10 2791:2 2833:18
1816 2885:9		321 2902:28	
19 2785:2 2787:1,3		3219 2809:6	
19-06-016 2785:12		322 2902:28	
19th 2834:9		3220 2807:9 2808:12	
1st 2884:10		3221 2807:11,28	
		323 2902:28	
		3343 2812:2	

Abel 2845:3	2916:13,22 2921:20,22	aerial 2888:11	2863:4 2864:26 2865:3, 12 2876:12,21 2877:8, 17 2878:5,9 2882:8,20, 24 2888:20,28 2889:6, 11 2890:28 2892:21,23 2893:4,8,14,24,27 2894:14 2896:20,26 2897:3,8,17 2898:18,23 2899:6,10 2900:3,16 2901:2,19 2902:2,10, 18,25 2903:6,28 2904:7 2905:6,16 2906:16,22 2907:18 2909:12 2910:17 2911:6,14 2913:18 2914:4,5,22 2915:8,12 2916:12 2918:5,22,27 2919:21, 25 2920:28 2921:5,16 2922:15,19,26 2923:4, 24,26,27
ability 2809:11 2851:14 2897:10	added 2911:12	aerosol 2898:6	
Absolutely 2847:20	addition 2811:17	affect 2863:19	
AC_CPUC_SED_DR_16_0020036 2802:8	additional 2808:4 2809:11 2818:15 2819:26 2821:10 2827:26 2828:6 2838:26 2869:13 2874:14 2895:9 2908:2	affected 2813:27	
AC_CPUC_SED_DR_16_0023727 2800:6		afternoon 2815:11 2834:1,13,24,25 2839:15 2876:15 2877:18 2883:6 2905:12	
AC_CPUC_SED_DR_27_0000431 2812:1	address 2794:16 2855:22,24 2856:16 2905:17 2906:16 2915:17 2920:1,16 2921:9 2922:21	agencies 2796:18 2797:13 2798:6,26 2841:7,13,14,18 2876:8 2887:11,12 2895:15,18	
AC_CPUC_SED_DR_27_0003207 2812:6	addressed 2801:17 2843:10 2851:20 2897:18 2899:13 2907:3 2921:6	agencies' 2897:26	
AC_CPUC_SED_DR_27_0003219 2807:6	addresses 2904:8	agency 2849:19,21	
AC_CPUC_SED_DR_33_0000060 2789:3	addressing 2879:7	agree 2787:16 2886:5 2899:22	alleged 2896:28 2897:16
access 2836:3 2838:19 2839:8 2858:22,23 2873:28	adequate 2788:14	agreed 2915:20	allowed 2846:25 2923:17
accounts 2805:19	adequately 2795:3	agreed-upon 2886:8	allowing 2833:8
accuracy 2828:16 2829:1 2874:24	adjust 2786:22 2843:21 2906:13	ahead 2785:18 2790:25 2795:22 2800:27 2812:25 2815:8 2862:25 2882:8 2893:4, 8 2894:16 2897:8 2900:11 2902:10 2904:12	alternate 2838:12
accurate 2820:5 2828:11,15 2852:9 2860:21	adjustments 2824:17	ADMINISTRATIVE 2785:9	Amazing 2888:6
accuse 2913:14	ADMINISTRATIVE 2785:9	air 2898:11	amenable 2905:14
achieve 2887:23	admission 2920:20	Alan 2792:2	amount 2809:17 2845:28 2858:15 2883:22 2918:15 2923:19
acknowledge 2923:12	admitted 2835:5	Aliso 2785:13 2809:2, 28 2810:9 2813:7 2816:6,27 2820:20 2835:8 2836:20 2842:15,17,20 2846:12 2857:15 2872:22 2873:6 2875:7 2878:17 2881:9,27 2883:10,16 2884:17 2885:24 2917:20,27 2921:25	analysis 2826:1 2828:26 2835:4 2850:7, 19 2855:11 2857:17 2859:3 2869:18
across-the-fault 2862:18	advance 2915:23		analyst 2913:24
act 2881:15	advice 2817:14 2919:10		analyzing 2849:13
actions 2898:4	advisement 2919:8,23		and/or 2905:7
activities 2822:23 2843:8	advises 2813:20		Andrea 2856:13
activity 2786:12 2817:6,9 2850:20 2884:16 2891:7	Advocates 2814:27 2815:7 2834:11,16,27 2837:8 2860:9 2892:24 2899:21 2900:7,13 2901:21 2904:1,24 2905:1,8 2906:19,26 2907:22,26 2908:24 2909:1,3,10 2910:13 2911:23 2912:14 2913:5 2914:23	ALJ 2789:21,25 2790:24 2795:12,21 2799:24 2800:24,26 2801:22,24,28 2814:22, 25 2815:4 2832:28 2833:2,13 2834:7 2836:22 2837:4,10,18 2855:12,21,22,24 2856:7,16,24 2857:7 2860:6,15 2862:20,25	annual 2809:18
actual 2824:22 2842:22 2866:25	Advocates' 2913:10		annulus 2794:19 2872:15
add 2803:21 2837:8 2840:21,22 2846:11 2847:16 2859:13,27,28 2870:8 2878:22,28 2885:11 2911:10			anomaly 2869:24
			another's 2902:20
			answers 2882:27 2912:8

anticipated 2799:20	ASAP 2868:14	authorized 2907:24	2821:25 2823:16
annulus 2846:27 2847:13 2848:14	asks 2811:4	availability 2874:28	2825:1,28 2830:16,19 2832:13 2839:13
apologize 2838:1 2857:6,10 2865:17,18 2878:11 2883:5 2893:5 2899:19	asserted 2911:26	avoid 2860:17	2841:1 2842:1 2846:2 2849:19,23 2850:15 2853:3 2854:19 2862:5 2869:15 2870:14 2872:12,25 2874:4 2890:12 2898:10
apparent 2787:26	assess 2797:25,27 2918:20	aware 2805:14 2824:19,24 2825:8 2830:8 2847:17,21 2892:10,14	
apparently 2830:24	assist 2792:23 2870:16,22		
appears 2793:3 2807:28 2808:4 2862:20	assistance 2805:21	B	Basin 2881:5,8
applies 2897:14	assisting 2826:9 2846:12 2847:17	back 2789:25 2790:14 2800:26 2801:24,28 2802:9 2805:9 2812:9 2814:25 2827:5 2833:2, 13 2834:7,8 2835:23 2851:11 2852:20 2858:27 2859:2,3 2871:15,23 2874:16 2877:12,17 2880:15 2881:21 2888:4 2889:6 2898:19 2899:7,10 2900:9 2904:24 2905:19 2907:8,15 2910:23,28 2913:20,24 2918:27 2920:15 2921:28 2923:4,13	basing 2906:7
appreciative 2874:27	assume 2828:15		basis 2796:10,14 2798:17 2821:28 2822:6,8,17 2842:4,10 2875:27 2879:26 2880:13 2883:14 2916:11
apprised 2791:26	assumed 2824:26		Bates 2789:1,2 2790:19 2800:5 2802:5,6 2804:13,14 2805:3,4 2806:2 2807:3,4,7,27 2808:12 2809:6 2810:21,22 2811:2,16, 27 2812:5,7
approach 2886:5	assuming 2827:7,8 2829:15,16		
appropriately 2830:2	assumption 2826:2		
approval 2844:20	assumptions 2827:6, 8,17,22 2828:11,22,24 2829:1,2,6,11,13,20,24 2830:1,8,10 2831:25 2832:3,7,10,14,15,20 2843:27,28 2844:1,8,9, 11 2886:19 2914:9		
approve 2832:6,7 2844:22	assuring 2830:1	back-and-forth 2918:15	bcf 2884:16
approved 2844:21	attached 2803:11	background 2812:11 2862:2	bear 2786:21 2801:21
approximately 2806:16 2822:11 2849:28 2868:8 2891:18	Attachment 2845:2	bad 2810:4	began 2868:11
April 2812:20 2922:1	attempt 2786:3,5 2788:24 2799:13 2817:21 2842:18,19 2857:5	badge-access 2839:5	begin 2814:28 2882:16
Arash 2800:16 2801:2, 5 2839:23 2885:15	attempting 2817:26 2818:4	Baker 2805:22 2806:22	beginning 2813:21
area 2788:23 2835:20 2836:16 2838:12 2850:2,13 2853:21 2858:10,13 2872:4 2898:1	attempts 2791:13,22 2806:26 2842:16,25 2880:8	balance 2883:11,14,15, 22	behalf 2849:3 2900:12
areas 2840:28 2841:2 2844:13 2866:24	attention 2921:9	balancing 2881:15 2894:12,20 2896:15	belief 2814:11
argued 2906:24 2915:24	attorney 2834:13,15	barely 2836:8	believed 2847:25
argument 2906:15 2916:9	attorneys 2910:16	barrel 2846:1	believes 2907:26
arguments 2906:2 2907:11 2919:3	attribute 2914:11	barrier 2852:15	bending 2863:19
arranged 2797:9	authenticate 2790:13	based 2819:13 2829:2 2840:13 2843:22 2845:17,19 2851:28 2861:8 2883:24 2886:18 2887:19	Bill 2845:3
arrived 2823:2 2872:22 2889:17	authentication 2790:18	barely 2836:8	bit 2799:19 2813:3 2871:10
	authenticity 2790:23	basically 2787:21 2793:12 2816:7 2818:13 2819:7,20	Blade 2835:3 2850:18 2853:25 2854:1,15 2857:18 2858:11,23,27 2859:2 2905:1 2909:26 2912:7,22 2914:3
	author 2803:18		Blade's 2850:18 2858:9,28
			blocking 2785:27

blow 2857:21	breaks 2904:13	2906:26 2907:22,25	2863:28 2864:2,4
blowout 2814:2 2922:7	Bret 2796:7 2802:15	2908:23 2909:1,2,9	2865:10 2866:11
blowouts 2805:19	2803:8,16 2808:5	2910:13 2911:23	2909:5 2915:28
BLP 2871:25	2822:2 2832:5 2873:12	2912:14 2913:5,10	2918:17
board 2791:27 2868:28	Bret's 2803:11	calculate 2825:1,2	casing 2792:15 2794:8
body 2805:10	bridge 2887:28	calculated 2844:11	2801:5 2808:27,28
Bone 2815:8,10	briefing 2797:10	calculations 2827:1	2813:9,10,22,25 2828:2
2825:28 2834:17,26	2876:8 2897:18 2923:1,	California 2881:23	2846:20 2847:6,8,23
2835:19 2852:7	20	2921:23,24	2848:12,14 2859:19
2905:10 2909:15	briefly 2837:11 2893:6	California/arizona	2861:1,24 2865:24
Bone's 2836:27 2837:1	2915:28	2881:3	2866:5 2869:28 2870:2,
Boots 2796:7 2797:2,4,	briefs 2923:7,8,14	call 2788:11 2796:16	3,4,5,6 2892:1
11 2798:8,24 2800:15,	bring 2865:6 2874:16	2820:16 2846:22,23	cataloged 2854:19
19 2802:16 2818:6,16,	2877:22 2889:27	2852:11 2900:3	catch 2856:2
18,24,28 2819:3,15,17,	2914:26 2921:8	2904:24 2905:18	caused 2862:18
23 2820:4,8,12,20,22,	2922:19,23,24 2923:2	2907:8,27	causing 2793:7,10
25,27 2822:3 2823:8,23	bringing 2868:27	called 2846:16,17	2810:5
2824:20,27 2825:6,16,	2877:12	2885:6,9	cavities 2871:7
17 2826:9,11,26	broad 2796:4	calling 2907:15	cavity 2871:17,19,22,
2829:23,27 2830:4,11,	broadly 2798:25	calls 2859:24 2876:7	28 2872:4,17 2878:28
12,24,28 2831:7,9	brought 2821:14,22,26	2908:10 2909:25	cc'd 2884:28
2832:14 2834:28	2822:9 2838:24,26	Calpa 2904:3	cc'ing 2807:15
2837:16 2839:10,18	2870:16,22 2892:11	Camco 2788:5,8,17	cc-ing 2800:14
2842:15,25 2843:26	Bruno 2864:6	2792:13 2793:22,27	center 2881:7
2845:10 2846:10	build 2828:5	2794:14	certified 2849:18
2847:16 2858:6	building 2835:26	camera 2908:19	certifying 2849:20
2868:27 2869:12	2836:16	2910:24 2911:19,20,28	change 2827:25
2872:20,21,23 2873:13	buildings 2835:25	2915:6	2844:6,14 2886:21,23
2878:1 2885:14,15,20	2839:5	Canyon 2785:13	changed 2796:11
2886:1 2889:17,20,23	bullet 2792:1,6 2859:12	2813:8 2816:6,27	2797:24 2818:14
2890:11	2860:20	2820:21 2835:8	2844:15 2862:11
border 2881:3	burden 2916:11	2836:20 2842:17,20	2880:16
bottom 2800:4 2801:4	burdensome 2917:28	2881:9 2883:16	changing 2797:23
2802:6 2804:13 2807:4	buried 2879:19	2884:17 2921:25	2880:2,8,13,19
2810:22 2812:8	buy 2881:21	capabilities 2870:21	channel 2841:15
2835:16 2853:14		capital 2808:5	characterize 2810:11
2857:25 2872:16		caption 2902:6	chat 2855:13
2911:10		care 2897:6,13	chats 2855:14
bounded 2849:28		carefully 2856:18	chatting 2855:19
brain 2870:19		Carnahan's 2920:20	check 2824:8 2856:14
breadth 2917:22		2921:10	2858:6
break 2799:26,28		Carol 2856:9	checking 2831:20
2801:25 2802:1		Caryn 2834:17 2893:2	chief 2822:10
2814:26 2815:5 2833:3,	cadence 2799:18	case 2813:6 2820:28	
4,15 2834:9 2876:13,	Cal 2814:27 2815:7	2845:28 2846:15	
15,19 2877:7,9,18	2837:8 2841:8 2860:9		
2889:1 2898:26 2899:2,	2892:24 2899:21		
11 2904:11	2900:12 2904:24,28		

chiefs 2840:24 2841:1	coalesced 2886:11	communications 2837:2,15 2875:6 2876:24,27 2906:11 2916:10 2917:12,18,19, 23 2918:12,14,20	conducted 2837:7 2845:11
Cho 2804:19	coast 2885:18		conducting 2879:5
Christmas 2891:16	Code 2921:23		confer 2888:26 2908:3 2914:23
chronological 2807:26	cold 2821:25		conference 2820:16 2906:12 2914:24
circle 2849:28 2920:15	collaborating 2827:13 2839:25 2879:16	communities 2895:20, 27	conferred 2914:5
circulate 2848:22	collected 2854:27 2855:1	community 2836:11 2896:2,12 2897:25 2898:3,11,14	confers 2913:3
circulating 2871:12,13	collecting 2853:25	company 2806:7 2843:6,7,10 2885:6,8,9 2921:24	configuration 2788:12 2792:9,27 2793:6 2827:24 2847:22
circumference 2853:20	collection 2853:7 2857:14 2916:7	company's 2814:8	confirm 2790:9 2833:14 2873:11 2902:21 2920:15
circumstance 2891:11	command 2832:5 2840:2,3,5,7,15,18 2841:7,11,19,20,25 2842:2,5 2887:24	compel 2904:25 2914:8	confirmed 2908:12
circumstances 2793:11 2870:28 2871:3 2880:26 2923:14	Commander 2840:26, 28 2841:3	compelling 2915:4	confirms 2792:20
circumstantial 2912:19	commander's 2887:25	complete 2870:19 2907:16 2913:1,6 2917:26,28	confused 2820:1
cites 2909:27	Commanders 2841:21	completed 2806:25,26	congregation 2858:3
City 2841:9	comment 2862:21	completely 2851:19 2884:7 2923:8	connected 2817:28
claim 2892:12	comments 2809:11 2905:7 2915:10 2919:22	completion 2850:21	connecting 2818:3
claimed 2911:27 2912:2	Commission 2864:7, 15 2917:21	compliance 2789:17	connects 2881:1
claims 2908:7 2909:9 2912:1	Commission's 2910:13	comport 2800:17	consequences 2814:7
clarification 2798:22 2855:17,25 2907:13	commitment 2809:18	compressors 2817:10	consideration 2893:12 2894:3,19 2896:24
clarify 2793:26 2820:7 2860:19 2863:11 2879:4 2891:13,15,27 2917:12,17 2918:7	common 2857:7	computing 2826:7	considerations 2894:13,26
clear 2838:27 2846:3 2848:1 2916:11 2918:5	communicate 2822:23 2841:15	concentrated 2906:4	consultation 2841:2
cleared 2869:20	communicated 2822:25 2830:11 2887:10 2890:6	concern 2794:25 2814:14 2861:25 2863:15,24 2873:18 2890:27 2920:19 2922:3,5,12,13	contemplated 2907:2
clearer 2900:6	communicating 2820:3,9 2825:17 2875:8,18,28	concerned 2795:8 2799:1 2814:11 2823:20 2862:2 2895:5 2896:9 2898:1	context 2861:14 2863:6 2912:21,23
clock 2836:14,15	communication 2792:14 2794:7,12,17, 18 2802:25 2819:22 2839:4 2847:22 2859:17,20 2860:24,26, 28	concerns 2795:14 2810:15,18 2819:10 2861:26 2874:20,24 2921:1	contingencies 2870:23 2871:3,9
close 2836:24 2867:3 2868:18 2893:22		condition 2788:23 2874:20 2880:2 2886:26,28	contingency 2868:21 2871:27
closer 2823:14,15 2838:17,18,23 2839:17 2879:2,3 2900:5			continually 2839:25
cloud 2831:8			continue 2785:17 2789:27 2802:2 2834:12,18 2837:27 2856:25 2860:17 2863:8 2883:3 2893:28 2898:26 2904:15 2910:10,18 2915:13,15
co-counsel 2905:10			

continued 2922:9	2873:13 2878:1	2835:25 2847:4	2884:20 2894:11,21
continues 2807:8,10 2812:7	2885:14,15,20 2886:1 2889:17,20,23 2890:11	2858:11 2882:26	cut 2893:20
continuing 2785:14,25 2808:10,17 2809:21 2908:24	Coots' 2819:3 2820:4 2825:17 2830:24,28	court 2855:16,27 2856:10 2893:16	cuttings 2871:15
continuous 2796:9 2798:17	copied 2902:6	Courville 2885:19	<hr/> D <hr/>
continuously 2797:20	copies 2824:16 2831:23 2832:9	cover 2786:21 2902:8 2914:1	daily 2822:8,16,21 2842:4 2875:27 2876:7 2880:13 2883:14
contract 2840:13	copy 2811:18 2824:2,5 2831:12 2832:22 2873:26,27 2874:1,20, 25 2889:19,21,25 2890:1,9,14,15	covered 2803:1	damage 2788:25
contracted 2850:19	cord 2849:25	covers 2903:1	Dan 2786:7 2794:3 2849:7 2850:26
control 2813:28 2814:3,5 2826:18 2830:7 2836:3,4 2849:24 2850:4 2853:21 2854:16 2867:18 2875:3 2885:7 2921:27	cordoned 2849:26	CPUC 2796:19 2797:12 2811:18 2822:15 2835:3 2849:15,17 2854:2 2884:6,13	Dan's 2851:13
controversial 2920:23	Corelab 2869:7,11,15	CPUC's 2849:22	Danny 2823:21 2824:24 2825:6,28 2826:14,21 2828:7 2830:8
conversation 2806:21, 22 2831:17 2832:24 2894:23	corner 2835:25	crater 2880:11,17	data 2790:3 2795:4 2807:4 2811:19,20 2832:17,18 2907:28 2908:5 2910:6,7 2913:2,7 2917:23 2918:11
conversations 2797:17 2798:17 2806:14 2814:13,16 2820:10,18,22 2821:16 2830:6 2831:28 2832:13,23 2875:12 2877:1,4 2910:2,5,6 2912:6,25 2914:2	correct 2786:3 2788:18 2791:3,17,18,23,24 2792:21 2793:8,23 2794:1 2801:14 2802:18,19,26 2803:3, 4,10,19 2804:20,21,26 2806:8 2807:18 2808:15,16 2809:9,23 2811:9 2812:20 2816:28 2817:19 2819:4 2820:23 2823:5, 24 2825:9,18 2827:6 2842:26,27 2859:22 2875:15 2878:3 2879:6 2890:11,16,17 2891:21 2892:2,3,8 2902:4,22 2904:4,5 2917:15	craters 2814:3	date 2804:27 2806:28 2812:21 2867:15 2876:11 2915:20 2917:2,26 2920:14 2921:28 2923:12,20
cooling 2869:24	correction 2860:14	create 2821:23 2847:11 2850:13 2860:27 2871:14 2893:16	dated 2786:27 2800:13 2802:12 2804:25 2807:16 2808:14 2812:20 2878:15 2899:24 2900:24,26 2901:1 2909:11
coordinating 2826:25, 27	correctly 2798:9 2804:9,10 2889:18 2891:5	creates 2840:8	dates 2916:18
Coots 2796:7 2797:2,4, 11 2798:8,25 2800:15, 19 2802:16 2818:6,16, 18,24,28 2819:15,17,23 2820:8,12,20,22,25,27 2822:3 2823:9,23 2824:20,27 2825:6,16 2826:9,11,26 2829:23, 27 2830:4,11,12 2831:7,9 2832:14 2834:28 2837:16 2839:10,18 2842:15,25 2843:26 2845:10 2846:10 2847:16 2858:6 2868:28 2869:12 2872:20,22,24	correlation 2801:8 2896:7	critical 2827:9 2916:1	dating 2921:28
	correspondence 2811:24	cross 2799:20 2864:22, 23,25,27 2921:10	day 2796:19,21 2797:21,22,23 2799:14 2803:14 2820:11 2822:13,28 2830:15,16 2839:14,15,26 2840:15 2874:4 2875:12,14,15, 17,21 2881:16 2898:28
	corrosion 2813:22	cross-examination 2785:20 2786:7 2794:24 2814:19,28 2815:6,9 2834:10 2837:7 2902:4 2905:26 2906:5 2907:1 2909:19 2920:21	day-to-day 2796:14
	counsel 2908:28	cross-examined 2815:24 2912:5	days 2822:11 2855:4 2868:9 2876:2 2878:8 2882:26 2888:3 2915:23 2919:17
	County 2841:28 2842:2,11	cross-exhibits 2904:3	
	couple 2803:15	cross-over 2846:16, 23,28	
		crossing 2785:16	
		Crosstalk 2809:13	
		current 2791:7 2796:13 2886:26,28	
		curser 2801:3	
		cusps 2836:26	
		customer 2883:13	
		customers 2867:7 2881:20 2883:23	

de 2791:2 2793:4 2802:17 2807:16 2815:20 2859:16	2909:3	diagrams 2794:4 2853:11	disrupt 2876:16
deadline 2789:12	demonstrative 2786:18 2833:9 2836:25 2837:23 2850:25	difficult 2820:14,16 2828:17 2836:6 2918:10	distance 2821:21 2836:10 2842:21
deal 2879:1 2905:5 2920:25 2922:28	densities 2825:2	digital 2836:14	distinct 2870:3
dealt 2904:21	department 2796:20 2841:27	direct 2882:10	distraction 2909:5
December 2800:13 2823:3 2878:16 2884:11	depending 2799:22 2813:25	direction 2862:19 2883:21 2895:22	disturbing 2850:13
decide 2792:8 2910:25	deplete 2884:7	directly 2817:28 2818:3 2832:23 2863:2 2865:11 2882:15	Division 2849:23 2884:6,14
decision 2787:26 2841:2 2851:27,28 2852:4 2907:6	deposition 2824:25 2825:7,20 2906:3 2915:21,24 2916:2,17, 21 2919:17,18	director 2812:26 2861:21 2884:15	document 2789:14,23 2790:2,5,9,14,21 2800:9,22 2802:21 2804:23,24,27 2805:3,8 2807:10 2810:24,25,28 2812:12,14,15 2849:13 2915:22,26 2918:6 2919:13
decisions 2791:13,22 2840:27	deputy 2822:10	disallowed 2837:23	documentation 2799:9
declining 2881:6	describe 2796:1 2828:19 2835:11 2852:24 2880:24	disclosed 2846:10	documented 2797:13, 19
dedicated 2822:5	describing 2837:13	discovered 2791:25 2816:7 2912:9	documents 2811:27 2872:21 2874:7,24,27 2890:14 2916:1,3 2919:10
deep 2809:2,27 2811:22 2813:6 2862:12 2879:19	description 2852:9 2878:21	discovery 2904:27 2907:23 2908:25 2910:12 2912:8 2913:4	DOGGR 2796:19 2797:9,10 2811:19 2822:15,21 2849:19 2875:19,20 2876:7,27
defer 2920:14	designed 2881:5,8	discuss 2806:4,12 2829:7 2905:4,6 2914:25 2920:23	Don 2873:15 2885:11
deferred 2904:22	designers 2885:13	discussed 2848:28 2865:11 2906:27 2909:13 2916:23 2917:5 2919:2	dotted 2852:28
deficiencies 2881:10	desired 2806:7	discusses 2865:7	double-wide 2839:2
define 2848:9	destruction 2850:14	discussing 2810:16 2863:1 2879:17 2892:1	doubt 2845:10
defined 2788:8 2824:25 2826:14,15 2853:21	determine 2888:23,26 2908:20 2911:24 2915:7	discussion 2795:13,20 2796:12 2797:20,28 2799:4 2801:15 2824:15 2827:20 2829:17,18 2831:13 2837:21 2844:18 2861:19 2862:22 2879:21 2911:7	downhill 2853:5
defines 2860:23	determined 2792:25	discusses 2865:7	downhole 2793:12
definition 2818:23 2917:23	develop 2828:4	discussing 2810:16 2863:1 2879:17 2892:1	DPH 2842:3
dehydrs 2817:11	developed 2819:7 2866:13	discussion 2795:13,20 2796:12 2797:20,28 2799:4 2801:15 2824:15 2827:20 2829:17,18 2831:13 2837:21 2844:18 2861:19 2862:22 2879:21 2911:7	draft 2793:3
delineate 2853:13	developing 2869:1	discussions 2798:12, 19,24 2799:3,6,8 2819:8,16,18,19,27 2829:10,14 2851:6 2861:16 2879:28	drafted 2797:14 2859:14,15
delineated 2850:2	development 2825:4 2864:18	disparity 2905:27	dramatically 2797:25 2827:25
delineating 2853:4	device 2826:7	disputing 2790:18,23	drawn 2821:1
deliver 2884:19	devices 2826:5		drill 2871:22
deliverability 2867:2,5	diagnostics 2830:15		drilled 2836:18
delivered 2882:3	diagonals 2839:21		
demand 2881:10,11, 12,13 2882:1,3,13 2883:13,17,25 2908:8	diagram 2844:5 2852:27 2853:12		
demands 2884:11 2897:26 2908:27			

drilling 2801:17 2838:21 2839:7,20 2871:10,11,12,15,16,24 2872:8 2878:20 2879:2 2885:9	edit 2793:5	2826:14,16,21 2843:23	18 2903:18,19,21,22, 24,25,27 2921:19
due 2792:9,27 2886:15, 17 2923:15	effects 2819:10	engineering 2844:9,12 2852:1	evidentiary 2785:11, 14 2786:25
duty 2897:6,12 2907:27	effort 2825:21 2830:9 2832:16 2847:17 2850:18 2898:12	engineers 2816:6	evolution 2865:8
duty-bound 2922:13	efforts 2816:4 2818:7, 19 2823:5 2824:21 2829:8	Enhancement 2864:8	exact 2806:28 2876:11
dynamic 2788:21 2803:19 2827:28 2880:5,12	Egbert 2791:1,6 2792:19,27 2815:20,26 2860:13	ensure 2884:2,17 2895:2	EXAMINATION 2834:22 2877:25
<hr/> E <hr/>			
e-mail 2791:1,20 2792:2,19 2793:2,3,20, 25 2794:27 2800:7,12, 20 2802:12 2803:8,12, 27 2804:17 2805:10 2806:9,13,19,23 2807:14,22,25 2808:13, 19,22 2809:12,20,23,25 2812:21 2815:19,21,23 2817:17,20 2824:3 2831:9,19,20 2851:20 2859:11,16,26 2860:5, 10 2861:12,21,23,27 2862:10 2863:28 2864:1 2865:4,6,11,13 2866:1,19 2867:11,13, 15,23 2868:7,18 2878:1,15 2884:27,28 2885:1 2886:20 2890:4, 6,9 2899:20 2908:1,2,4 2922:1	Egbert's 2851:20 2860:4	enter 2900:14 2901:6	examining 2919:16
e-mails 2807:23	elaborate 2861:17 2866:21 2922:4	entered 2900:21	exceeding 2864:25,27
earlier 2839:9 2852:22 2861:16,19 2868:9 2895:1 2898:20 2919:8	electric 2881:19	entire 2787:21 2805:3 2816:17 2887:15,22 2888:5 2897:28 2898:1, 13	excerpt 2851:7
early 2876:14 2883:28 2920:10 2923:15	electronic 2811:26 2872:26 2889:19,25 2890:9,15	entirety 2805:8	excluded 2798:6,26 2799:1
easier 2831:14,17 2852:27 2857:21	emergency 2840:6 2841:11,23 2843:2,12, 14	entitled 2868:2	excuse 2813:12,13 2855:12 2859:23 2892:28
eastern 2853:2	Emilsen 2803:9,18,27 2870:10,12	entity 2849:16	excused 2899:4
easy 2838:19 2839:8	employee 2878:3,13	entries 2920:12	execute 2819:12 2844:25,26 2846:2
echo 2859:28 2893:20	employees 2818:27 2819:17,23 2822:2 2884:4 2895:3,11 2896:6	entry 2902:23 2914:19 2920:13	executed 2868:8 2869:4
echoey 2893:15	empty 2792:13 2793:22	equipment 2817:11 2819:12 2824:9	executing 2868:16
	end 2794:6 2804:1,3 2808:24 2898:28 2923:6,9	escort 2822:17 2855:5 2875:25	executives 2897:7
	endeavor 2919:12	essentially 2908:5,16	exhibit 2786:18,23 2788:27 2789:9,17,20 2794:26 2795:7,16 2799:16 2800:3 2801:21 2802:4,7 2804:12 2807:1,2,3 2810:20 2812:4 2815:18 2835:3 2837:9, 13,24,26 2845:2,4 2852:20 2859:9 2861:12 2863:2,3 2865:19 2867:10 2869:7,10 2870:9 2877:23,28 2884:23,25 2900:18 2901:10,11,13, 14,16,17 2902:7,8 2903:7,8,10,11,13,14, 16,17,19,20,22,23,25, 26 2914:21 2920:21
	ended 2886:7	establish 2807:7 2840:23 2841:12,18	exhibits 2833:9 2836:25 2863:7 2898:27 2899:13,19,27 2900:8,13,27 2901:6, 25,26 2902:20,24,26 2904:1,8 2920:10,13
	ending 2807:10,27 2808:12 2809:6 2812:2, 8	established 2840:12, 18 2897:14	
	ends 2807:8 2920:8	estimate 2918:13	
	Energy 2803:22 2846:11 2847:16 2870:8 2878:22,28 2884:5,13 2885:11	evening 2880:14	
	Enforcement 2849:23	event 2887:23 2892:17 2895:1 2898:5,15 2922:7,11	
	engineer 2817:14,16	events 2791:7 2879:9	
		eventually 2866:10	
		ever-changing 2796:11	
		everyday 2797:27	
		evidence 2830:23 2850:14 2853:25 2854:13,14,17,26 2855:1 2857:13 2858:26,27 2901:15,16,	

2921:7	2849:10	fax 2890:6	five-minute 2801:25
existence 2846:9	extent 2794:23 2883:28 2886:13 2914:1	faxed 2872:25 2890:12	flag 2799:18,23 2922:4
existing 2913:2	extraordinary 2887:22	fear 2893:15	flagging 2921:18
exotic 2885:13	extreme 2860:1	feasible 2792:25 2850:9,11	flee 2909:7
expand 2840:13	extremely 2880:12 2888:13 2907:9	February 2802:12 2803:14,18,26 2884:12	flew 2888:9
expands 2840:20		feel 2922:20,21 2923:10	flight 2872:28
expect 2824:13 2826:12 2829:27 2830:3 2832:8,12 2842:25 2904:20 2919:11 2923:14	<hr/> F <hr/>	feels 2922:13	flow 2787:28 2828:4 2846:19,26 2847:7,11 2871:7,18 2880:10 2881:5 2883:21
expectation 2820:24 2832:22	F-4 2888:9	feet 2798:14 2821:13 2854:9 2869:25 2879:26,27 2886:22,23 2888:10	flowing 2851:16 2852:3 2871:23 2891:3, 9
expected 2824:14 2826:8	face-to-face 2831:17	FEMA 2840:12 2841:5	fluctuates 2881:11
expensive 2885:19	facilitate 2848:21	FEMA's 2840:6	fluid 2814:1 2825:1,2 2848:24 2851:26 2871:18,19
experience 2811:22 2842:14 2845:17,20 2862:13 2870:21 2885:5	facilities 2811:8	Ferguson 2805:21 2806:21	fluids 2817:25 2824:12, 13 2847:12 2848:22 2852:5 2871:27 2872:16
expert 2794:3 2824:27 2826:12,16 2830:5 2845:15 2870:15	facility 2816:27 2820:21 2830:25 2835:9 2875:7 2896:5 2917:20 2921:25	fiber 2839:3	focus 2864:23 2905:25
expertise 2868:28 2885:11	fact 2788:15 2820:3 2848:20 2878:24 2908:11,23 2911:8 2912:5 2913:25 2918:24	field 2816:14,17 2817:1 2867:5 2877:2 2884:3 2886:4 2887:4,16 2893:13 2894:4,22,25 2895:3,10 2897:7 2917:8	focused 2801:16 2823:14 2905:26 2906:4
experts 2821:2 2835:1 2839:22 2845:18 2846:11 2847:15,25 2873:28 2874:6,11,19, 23 2875:1,8 2886:4,5	factor 2843:15 2853:4	fields 2811:23	focuses 2864:16
explain 2843:28 2896:21	factors 2844:12	file 2848:2,3 2872:27 2873:2,5,7,16,19,20,25, 26,27 2874:1,7,21,25 2889:20,26 2890:1,10, 14	focusing 2912:18
explaining 2883:8	failure 2849:13	filed 2790:10 2864:20 2866:16	follow 2844:26 2857:24
explanation 2787:17 2793:27 2882:11,28	fair 2787:23 2810:10 2850:8	files 2830:18 2874:16	follow-up 2908:2,4
express 2873:18	fairly 2904:20	filing 2864:7,9	form 2796:28
expressed 2861:25 2863:16,25	falls 2840:6	fill 2872:15	formal 2798:19 2876:26,28
expressing 2909:22	familiar 2789:6 2790:1 2800:8 2802:20 2804:23 2807:21 2810:24 2812:11 2817:7,9 2843:3 2849:4,7,8 2907:12	find 2805:20 2854:7 2912:15,16	formation 2872:13
extend 2853:15	farther 2836:10	fine 2815:13 2856:16	forming 2880:11
extended 2894:10,21	fashion 2890:16	finger 2853:18	Fortenberry 2792:2
extensive 2837:21 2909:20	fast 2872:24	Finish 2910:18	forward 2796:9 2808:7
extensively 2846:8	fatigue 2823:20	finished 2834:10	forwarded 2803:8,16
	fault 2813:23 2814:12 2861:28 2862:3 2863:16,24 2912:17	fire 2796:19 2841:8,9, 10,28 2842:2,12	forwarding 2793:5
			found 2793:13 2799:5 2825:10 2827:25 2854:5
			foundation 2789:5 2790:8,13 2794:25

2795:10 2802:11 2804:16	2852:24	2869:23 2872:19 2875:5 2880:20 2882:6, 9,20,22 2884:24 2888:24,25 2889:10,13, 15 2890:26 2891:1 2905:19,21,22 2911:16 2916:24,25 2917:16 2918:10 2919:7,20 2920:3 2921:2,3,14,16, 17 2922:18,25	2793:7
foundationally 2880:24	generation 2881:20	Gruen's 2882:15	harm 2788:25 2896:10
founders 2885:7	gentleman 2861:5	guard 2836:2 2849:25	Hatteberg 2823:11
frame 2818:8 2861:20 2884:9,13 2923:16	GEO 2845:28	guessing 2914:14	Haug 2803:9,27
frankly 2911:22	geological 2814:12 2862:1,17	guidance 2905:3 2916:16 2919:9,26	headquarters 2858:28
frequently 2854:26 2875:13	get-togethers 2796:6	Gulf 2885:17	heads 2904:14
fresh 2823:18	gist 2921:21		headset 2893:19
front 2800:3 2827:21	give 2818:8 2821:8 2827:4 2869:18 2906:13 2923:18		health 2841:28 2896:11 2897:24 2898:3
full 2873:1	goals 2910:15		hear 2785:24 2856:8 2873:17 2874:5,10,13 2907:6
fully 2847:21	Goleta 2810:5		heard 2852:7,12,17 2874:8
function 2866:27	Gomez 2818:14 2823:12 2885:15		hearing 2849:3 2920:8
functional 2840:10	good 2785:10,22,23 2801:7 2803:23,25 2815:11,13 2817:13,15 2834:24,25 2856:25 2877:7 2890:8	H	hearings 2785:11,14 2786:25 2905:26 2920:26 2923:6
functions 2830:25 2831:6 2842:8 2873:24	gosh 2877:28	H-O-L-T-E-R 2857:3	hearsay 2860:1,17
future 2788:26 2916:16 2919:11	govern 2843:8,9	Hagshenas 2800:16	Hecht 2814:25 2834:7 2836:22 2837:4,10,18 2855:22,24 2856:7,16, 24 2857:7 2860:6,15 2862:20,25 2863:4 2864:26 2865:3,12 2876:12,21 2877:8,17 2878:5,9 2882:8,20,24 2888:20,28 2889:6,11 2890:28 2892:21 2893:4,8,14,24,27 2894:14 2896:20,26 2897:3,8,17 2898:18,23 2899:6,10 2900:3,16 2901:2,19 2902:2,10, 18,25 2903:6,28 2904:7 2905:6,16 2906:16,22 2907:18 2909:12 2910:17 2911:6,14 2913:18 2914:4,22 2915:8,12 2916:12 2918:5,22,27 2919:21, 25 2920:28 2921:5,16 2922:15,19,26 2923:4, 24,26
	governor's 2822:25	half 2831:15	helpful 2865:5 2916:17 2918:8
G	GRA 2808:1	Halliburton 2800:19 2818:16 2820:28 2823:9 2838:21 2839:19 2873:14	helps 2848:21 2893:24
game-time 2851:27	gray 2835:27	hand 2836:14 2904:17	
gas 2785:13 2787:28 2828:21 2843:3 2846:19,25 2847:7 2848:13 2851:15 2852:3 2867:7 2871:23 2880:10 2881:4,5,17, 21,26 2882:1,2,5,12,19 2883:10,12,18,20,23 2884:17 2891:9 2894:11,22,25 2909:8 2921:24,25	GRC 2866:17	hands-off 2850:16	
gather 2918:11	great 2815:17 2876:21 2921:5	handwritten 2908:14 2913:22	
gathered 2858:16	greatest 2883:28	happen 2821:21 2881:26 2883:9 2922:11 2923:23	
gathering 2870:19	ground 2828:22,28 2879:20	happened 2831:4 2895:2,7	
gave 2827:26 2923:5	grounds 2795:10	happening 2798:3 2814:6 2869:19 2876:9 2879:12,19,23,25	
general 2788:4 2793:27 2795:26 2796:2 2797:19 2844:6 2865:9	groundwater 2912:26	happy 2806:4 2909:26 2910:3,21,23	
generally 2788:2 2791:28 2802:22	group 2819:8	hard 2787:19 2824:2,5, 16 2831:12,22 2832:9, 22 2836:12 2873:26,27 2874:1,20,25 2889:21 2890:1,15	
	Gruen 2785:15,18,19, 21 2789:10,15,27,28 2790:20,24,27 2795:12, 21,23 2798:28 2799:15, 24 2800:1,28 2802:2,3 2815:24 2836:21,22,23 2837:11,12 2839:28 2842:13 2846:7 2847:2 2859:27 2862:21,23,26 2864:21 2866:19	hardware 2792:10,28	

hiatus 2904:28	2904:6,18 2905:9,22	identified 2786:2,4	include 2799:8
hierarchy 2840:8	2906:25 2909:18	2790:15 2837:24	2842:11 2917:19
2841:12	2910:20 2911:12,17	2859:19 2900:21	included 2792:24
high 2796:1	2913:16 2914:17	2902:3,7 2903:2	2796:6 2797:11,12
high-demand 2884:10	2915:2,18 2916:25	identify 2790:12	2798:7 2811:21
higher 2842:6	2919:20,24 2920:4	2805:6 2827:17	2818:13 2819:17
highest 2884:11	2921:3,14,17 2922:25	2836:13 2856:5 2901:5,	includes 2802:17
Hilary 2800:13,20	2923:3	28 2902:26	2912:11
2878:2,12 2885:22	Honors 2789:12	identifying 2817:3	including 2800:16
hill 2821:17 2842:22	2905:5 2907:7,12,21	ignition 2888:7,9	2864:12 2867:13
2853:19	2908:20 2909:10	ill-advised 2910:22	2912:6,12 2920:9
hillside 2853:14	2910:11,24 2915:5	image 2852:25	incomplete 2886:14
history 2816:15	2916:28 2920:13	imagine 2814:8	inconsistency
hit 2799:27 2871:17,28	Honors' 2789:18	impact 2867:4,6	2794:28
2872:17	hope 2815:15	2880:9,10	individual 2823:11
hold 2900:4 2906:18	hoping 2916:20	impacted 2898:14	2885:5,8,20
holding 2893:22	horizontal 2862:19	impeachment 2789:17	individuals 2800:15,18
hole 2827:27 2828:1	2864:10	implement 2841:24	2802:16 2818:12,24
2871:24	hour 2799:21,26	implicating 2840:1	2820:13,26 2822:4
Holter 2854:2 2855:6	2833:18	implored 2895:15	2823:8,13 2828:8
2856:28 2906:3	hours 2793:12	important 2828:12	2829:23 2870:20
2914:15 2915:15,21	house 2805:23	2872:4,5	2873:8,13,18 2885:17
2918:12,16 2923:10	housekeeping	Importantly 2911:26	2918:13
Holter's 2916:4	2898:27 2904:9,19	impressed 2887:11	indulge 2871:9
2917:18	2915:16 2919:28	2888:2,4	industrial 2881:20
Holzschuh 2908:9	2920:25 2922:27	impression 2820:2	industry 2845:16
2911:5	housing 2846:18,25	impromptu 2798:11,	2885:6
home 2823:21	Houston 2820:9,18	23,25 2799:8	inform 2916:28
homes 2909:7	2821:1 2830:6 2858:28	inaccurate 2860:21,23	informal 2876:26
Honor 2785:19 2789:7,	2859:4	2861:8	2877:1,4
8,15 2790:7,17,22	huddle 2839:14	inaudible 2861:4	information 2788:22
2794:23 2795:17,23	2875:11	2900:1	2791:19,27 2797:28
2799:17 2800:2,22	hundred 2821:12	incident 2785:28	2811:6 2816:13,16,27
2801:1 2814:18	hurt 2888:5	2788:17 2823:17	2827:13,26 2828:6,7,
2834:20 2836:21	hydrate 2785:27	2832:5 2838:4,15	13,16,20,27 2829:3
2837:5,12,28 2855:15	2786:2 2869:14,20	2840:2,3,5,7,11,14,15,	2830:13,20 2831:1
2856:12 2859:23,27	I	16,17,26,28 2841:3,5,6,	2832:2,9 2841:16
2862:24 2863:9		9,11,20,26 2843:4	2845:19 2852:1
2864:21 2865:1,15	I.19-06-016. 2786:25	2844:3 2854:7 2857:28	2854:20 2861:9
2877:6,21 2882:6,14,22	ICS 2841:6	2858:1 2862:6 2864:6	2869:13,19 2873:19,21
2888:18,25 2889:10,13	idea 2816:19 2827:27	2867:18,22,25 2868:19	2886:15 2887:19
2890:23,27 2892:19,26	2871:2	2873:2 2881:27	2889:25 2912:10
2893:6 2894:5,9	identification 2901:10,	2885:18,25 2887:24	2916:28
2896:13,22 2897:5,21	12,13 2903:7,9,10,12,	2888:13,15 2892:8,13	informed 2823:28
2898:22 2899:5,16	13,15,16	2895:13 2898:1 2916:5	initial 2791:13,22
2901:23 2902:22		2917:27	2816:8,10 2819:20
			2907:25

initially 2799:20 2818:10 2917:14	introduced 2856:20 2921:19	Joaquin 2881:4	kind 2821:8 2836:18 2853:1,15 2862:11 2872:1 2874:11 2893:15 2923:16
initiative 2866:3	inventory 2884:16	job 2843:24 2848:21	knew 2826:1 2828:24 2921:24
injection 2817:2,4 2865:27 2881:14	investigation 2785:12 2909:2 2918:4	jobs 2801:9 2825:1 2848:25 2868:27	knock 2898:9
injured 2892:7,12,16	involved 2791:12,21 2816:10,11 2830:1 2842:24 2867:24	jog 2873:9	knowing 2868:22
inside 2870:6	involvement 2867:22	John 2823:10 2839:22 2873:15 2885:1,2,4	knowledge 2806:10 2892:16 2912:26 2914:2 2922:6
insists 2908:16	issue 2790:10 2843:11, 19 2867:1 2879:5,9 2897:17 2906:17,18,24 2908:6 2910:10,22 2911:21 2912:27 2913:1 2914:14 2915:13,24	jotted 2908:13	Krishnamurthy 2912:25
inspect 2864:13	issues 2810:9 2814:12 2821:24 2856:5 2861:24 2866:20 2898:5 2906:7,9,14 2907:14 2915:16 2919:28 2922:27 2923:10	JUDGE 2785:9	<hr/> L <hr/>
inspecting 2890:19	item 2905:2 2920:18	judgment 2912:22	<hr/> LA 2841:9,28 2842:2,11 2881:5,8
inspection 2808:27 2813:9 2855:7 2858:21 2865:24 2866:5 2875:23,26 2876:4	items 2844:6 2848:28 2863:22 2904:20	July 2923:15	laboratory 2859:3
install 2787:27 2788:16 2810:17 2813:6	<hr/> J <hr/>	June 2900:26 2901:1 2915:21 2917:2 2923:23	Labs 2885:24,26 2886:1
installed 2787:5 2788:10 2810:4,8	James 2804:17	<hr/> K <hr/>	Lagrone 2800:13 2818:13 2823:12 2878:1 2879:10
installing 2809:27	January 2807:17 2808:14,19 2809:7,23 2884:12,13	keeping 2797:6	laid 2795:3 2861:23
instance 2912:1 2916:2	Jim 2800:12 2805:27 2806:23 2807:19 2808:14 2810:16 2812:16 2814:13 2818:13 2823:11 2861:21,25 2862:1,6,11 2863:21 2867:24 2878:1,25 2885:13	key 2872:26 2881:28	landslide 2813:22 2862:28
instructed 2850:4,12	Jim's 2809:10,24 2814:11 2861:23 2863:15	keys 2854:18	landslides 2863:5
instructions 2789:18	Jimmie 2804:19	kick 2871:25	Lane 2796:7 2802:15 2803:8 2804:18 2822:2 2832:5,8,12 2844:19, 20,22 2873:12 2885:1
integrity 2808:2,7 2863:20 2864:18 2866:8,9,12,14	JM0005 2804:15 2805:4	kill 2791:8 2792:23 2797:24 2799:11,12 2801:9 2803:3 2804:8 2806:26 2814:1 2817:18,21 2818:1,5 2824:12,13 2825:1,4 2827:19 2828:5 2832:6 2842:18,19 2843:24 2844:14,15 2845:14,22 2847:12 2848:18,21,25 2851:26 2852:5 2868:19,26 2869:1 2871:5 2872:6,7,9,10, 12 2879:5,14 2880:8 2885:13,27 2886:2,5,12 2887:9,13,26 2895:15, 23 2896:25 2897:26 2922:8	laptop 2825:9,25 2826:4 2830:22 2831:2, 3
intercept 2823:15 2872:10	JM0007 2805:4 2806:1	killed 2848:18 2921:26	large 2801:5,6
interest 2805:25		killer 2898:6	largest 2909:8
interfere 2850:20		killing 2843:18 2894:13 2895:25 2896:3	lasted 2823:1
interject 2789:8		kills 2806:25 2842:14 2843:2,4,11,12 2869:4 2870:23 2887:28	LAW 2785:9
interrupt 2882:7 2909:12			lawsuit 2892:10,14
interrupted 2863:11 2883:6			lay 2789:5 2790:8,13 2802:11
interruption 2856:15 2900:2			laying 2795:10 2804:16
interstate 2881:2,22 2882:12			lays 2845:23
interstates 2881:1 2882:4 2883:13,20			
introduce 2802:4 2812:4			

LCM 2845:26	lists 2899:12		Mansdorfer 2804:17
lead 2908:26	load 2881:7	M	2806:11,15 2807:14
leak 2785:13 2791:25 2793:13 2798:14 2805:14 2813:25 2816:6 2822:12,19 2828:18,19 2840:16,19, 21 2849:20 2858:5 2861:25 2867:19 2870:2 2875:24 2879:26,27 2880:5 2886:22 2896:10 2909:8	located 2818:28 2857:27 2858:8	M-A-N-S-D-O-R-F-E-R 2812:17	2808:14,18,22 2809:8, 22 2812:16 2813:20 2861:13,16 2863:27 2867:12 2868:1
leaking 2831:21 2848:8,13 2851:16,22 2855:7 2891:12	location 2820:15 2834:28 2835:18,21 2837:2 2838:25,27 2853:9 2858:20 2883:25	Macondo 2885:18	Mansdorfer's 2867:21 2921:28
leave 2880:14 2920:7 2922:28	locations 2822:12 2837:21 2838:8,14 2858:12	made 2791:21 2824:17 2840:27 2844:9 2851:28 2852:4 2860:22 2864:1 2880:27 2918:22 2919:3	manufactured 2846:18,24
led 2787:22 2910:6 2912:8	log 2808:27 2813:10 2874:15	main 2835:3 2858:13 2880:28 2881:7	mapping 2888:11
Lee's 2805:23	logged 2854:19	mainframe 2831:8	mark 2799:26 2901:5 2902:25
left 2785:15 2823:3,4,6 2830:16 2835:24 2857:25 2918:3	logistics 2840:25	maintained 2854:16	marked 2900:21 2901:10,11,13 2903:2, 7,8,10,11,13,14,16
left-hand 2835:24 2853:16	long 2816:19 2839:15	maintenance 2786:12 2843:19 2851:11,18	material 2853:28
legal 2897:13,17	long-winded 2872:2	major 2813:24	materials 2819:13 2824:8,12 2850:15 2854:3,4 2858:16
Legrone 2885:13	longer 2856:11	majority 2838:3,5 2859:1	matter 2905:11,15,23 2907:25
length 2909:28	looked 2810:27 2812:13 2864:4,18 2873:8 2878:22 2898:8 2923:4	make 2826:3,24 2828:22,23 2829:3 2860:10 2864:1 2866:10 2871:20,21 2881:9 2890:13 2901:27 2906:1 2923:27	matters 2863:2 2865:10 2904:9
lesson 2856:17	loose 2920:8	makes 2841:1 2908:7 2918:10	maximize 2883:26
level 2788:4 2796:2 2884:16	lose 2804:5	making 2839:4 2896:7 2914:9 2921:20	meaning 2859:26
levels 2842:6	loss 2871:18,20	management 2841:5, 23 2864:19 2866:8,10, 15 2867:25 2917:21	means 2799:2 2882:2
liaisons 2840:24	lost 2830:22	manages 2840:18,19	meant 2820:17 2843:28 2856:15 2860:13 2866:22
light 2921:18	lot 2796:22 2805:17 2821:24 2831:14,16 2838:7,8,13 2843:7,26 2854:6 2855:2 2858:14 2885:5,16 2907:22	managing 2792:3 2817:5	meet 2839:14 2883:24 2908:3 2913:3 2914:22
Likewise 2839:16	Lotterman 2909:20	Mandelbaum 2834:17 2859:23 2892:26 2893:2,3,6,10,21,26 2894:1,9,17 2896:20,22 2897:5,21 2900:1,4,12 2904:5 2905:9,20 2907:19,21 2909:18 2910:20 2911:12 2913:16,19	meeting 2797:13 2798:19 2821:15 2824:5 2842:10 2875:16 2885:28
limit 2910:11	Lotterman's 2909:27		meetings 2795:27 2796:2,5,16,17,23,27 2797:3,5,7,8 2798:5,11, 23,26 2799:10,11 2842:5 2855:3 2858:2 2876:26,28 2904:28 2913:26
limitations 2850:10	lower 2835:24 2852:27		memo 2909:10 2923:5
limited 2907:10	lubricant 2871:14		memory 2873:10
lines 2787:1 2880:28 2882:12	luck 2810:4		Mendez 2856:9,10,23
list 2855:14 2917:26,28	lunch 2799:22 2833:15 2834:8 2877:3		
listed 2832:10 2835:20	lying 2908:18 2913:14 2914:9		

mention 2863:4	2823:24 2824:22	mute 2878:4	2911:19
mentioned 2785:26 2816:9 2818:22 2835:19 2838:6 2849:25 2861:14,27 2872:7 2873:3 2880:4 2884:1 2885:22 2906:10 2917:7	moment 2789:9,13,22 2800:23 2876:12 2923:2	muted 2878:6	notes 2797:6,14 2798:27 2904:26 2907:17 2908:10,13,14, 17,19,21 2909:4,23 2910:4,24 2911:24 2912:9,14,22 2913:20, 22,25,28 2914:20 2915:4,6 2916:8 2917:4,6,8
mentions 2863:21	morning 2785:10,22, 23 2788:28 2789:11 2790:5 2791:25 2796:15 2815:5,13,21 2839:15 2850:24 2855:2 2858:2 2859:10 2861:4,11 2880:15 2904:23 2905:13 2906:8 2915:14	N	notice 2867:4
met 2842:4	mornings 2858:4	names 2856:1,5,19 2900:18	notified 2922:17
methane 2888:12	Mort 2870:10	narrative 2811:21	noting 2805:4 2860:14 2905:22
microphone 2893:19	Morten 2803:9,27 2870:14 2878:25 2885:10	National 2885:23,26 2886:1	notwithstanding 2908:11,23
middle 2811:15	Moshfegh 2850:27 2852:19 2857:10 2859:8 2865:16,20 2867:9,27 2869:6,21 2877:22 2884:22	natural 2799:27 2921:25	November 2791:14 2804:26 2842:19 2867:16,26 2868:12 2880:23 2884:10 2899:24 2900:24
Miller 2862:14	motion 2790:11,16 2914:26 2920:12 2921:20 2922:19,23,24	nature 2797:18 2844:7	number 2789:1,2 2790:19 2800:14 2802:5,6,16 2804:13,14 2806:2 2807:3,4,7,27 2809:6 2810:21,22 2811:16 2812:6,7 2813:26 2839:28 2858:15 2901:28 2917:2
mind 2787:24 2847:21 2894:20 2916:19	motivation 2914:12	necessarily 2797:18 2831:19,27 2832:21 2872:9 2886:25	numbers 2805:3,5 2900:18 2902:11
minor 2904:21 2920:25	mouth 2893:23	needed 2818:2 2824:9 2855:26 2875:2	numerous 2857:27
minus 2799:21	move 2795:9,22 2848:14 2881:22,23 2882:4 2890:26 2897:19 2901:20 2902:17 2903:3 2909:16 2910:19 2914:13 2915:9 2918:9	neighboring 2895:20, 27 2896:11 2897:25	O
minutes 2803:15 2888:22,26	movement 2813:23 2814:12 2862:18,19,28	neighbor 2895:20, 27 2896:11 2897:25	object 2795:9 2856:17 2862:26 2890:24 2896:14 2911:20
mischaracterizes 2913:20	moving 2795:15 2808:6 2869:5	Neville 2786:8,11 2794:3,15,28 2849:7 2851:10 2891:7	objected 2916:8
missing 2919:19	mud 2804:5 2871:12	Neville's 2786:16,19 2787:16 2850:26	objection 2789:15 2836:28 2837:19 2859:28 2862:23 2863:8 2882:9,23 2894:5 2901:3 2903:3
misstated 2796:26	multiple 2841:13,14,18 2862:5 2878:10 2894:11 2913:4	night 2861:6,7	objections 2789:19 2901:8
mistake 2913:15		nipple 2788:6,17 2792:14 2793:23,28 2794:14	objective 2878:19 2887:5,7,13,17,20,23,
mistakenly 2859:19		nodding 2893:18 2904:13	
mister 2870:11 2898:8		noncontroversial 2920:6	
misunderstanding 2830:26		nonresponsive 2908:15	
mixing 2845:26		normal 2880:25	
model 2819:6 2824:25 2825:1,5 2827:21 2832:25 2844:10,24		Nos 2903:26	
modeled 2801:5		notation 2912:21,24	
modeling 2801:12 2818:19,22,23 2819:14 2824:21 2825:24 2826:6,10,22,26 2827:9,16 2828:12,23 2829:19,24 2830:9,23 2831:6,24 2832:11,16 2843:26 2845:9,12 2870:14		notations 2912:11,24	
models 2819:4		note 2789:16 2794:27 2834:14 2882:25 2905:25 2909:1 2912:13	
		noted 2795:14 2803:28	

25	on-site 2792:7,22 2818:20,25 2819:21,25 2820:8,12,20,26 2821:3,4 2822:4 2823:9 2830:12 2831:13 2845:21 2854:4,28 2857:13 2858:5,6 2873:16 2875:20,21 2876:3 2887:15 2889:17,28 2892:16 2898:2,13	2829:12 2844:16,23	participate 2806:5 2819:27 2820:10
obligation 2913:6	opening 2899:23 2900:23 2923:7,14	outstanding 2920:12 2921:7 2923:28	participated 2795:28 2816:7 2908:3
observation 2838:12	operate 2922:10	overrule 2863:8	participation 2806:20
observations 2806:12 2830:18	operating 2897:7 2922:6	overruled 2837:19	parties 2842:11 2888:22 2899:12 2904:2 2910:5,8 2920:24 2922:22
observe 2786:7	operation 2792:23 2796:17 2816:8,10,16 2817:24 2842:10 2846:13 2875:3 2887:6	<hr/> P <hr/>	
observed 2828:8 2908:22	operational 2799:13 2873:4	P-39A 2802:25,28	
obtain 2917:28	operations 2788:26 2792:3 2795:27 2796:3, 21 2798:7 2803:6 2812:27 2816:12 2822:10 2840:24 2842:9 2843:10 2872:8	p.m. 2789:11 2800:14 2833:19 2834:1	Parts 2786:9
obtained 2899:18	opinion 2787:20 2862:12	packer 2792:11,16,28 2793:7,16,19 2794:9, 13,17,20 2859:20,21 2860:24,25,26	party 2909:2 2919:6
obtaining 2819:12	opportunity 2790:8 2851:6 2906:6,8,13	pad 2799:4 2821:10,12, 14 2835:14 2836:17 2838:9,10 2857:27	past 2789:11 2853:15 2882:26 2923:7
occasionally 2797:11	optics 2839:3	pads 2898:8	Patel 2789:7 2790:17, 22 2795:15,17 2834:14, 19,20,23 2837:4,5,25, 27,28 2856:25,26 2857:9 2860:6,8,18 2863:1,9 2864:27 2865:1,4,15 2876:18,23 2877:6,20,21,26 2878:14 2882:14 2883:3,4 2890:20,23 2892:22,24 2893:12 2894:3,5,19,28 2896:13,26,27 2897:11, 12 2898:19,22 2899:15, 16 2900:10,14,17,22 2901:24 2902:21,22
occur 2797:20 2801:16 2805:15 2824:10 2920:17	option 2851:23	pages 2890:10	path 2828:4 2847:12,23 2848:13 2860:28 2879:20 2908:25
occurred 2801:13 2825:12 2831:4 2843:5, 22 2847:10 2891:8 2905:1 2920:16	order 2794:18 2795:7 2807:27 2828:11 2851:3 2872:23 2881:26 2883:9 2884:6 2890:8	pandemic 2831:16	patience 2877:12
occurring 2793:12 2796:23 2798:18,20 2827:12,14 2854:9 2880:7	organization 2827:3	paper 2824:2 2913:22	pending 2892:15
occurs 2881:16	organizations 2842:7	papers 2805:18	people 2818:6,16,20 2819:21,25 2820:4,8,9, 22 2821:27 2823:18 2831:6 2839:19,20 2840:22 2858:15 2884:26 2887:15 2898:2 2904:10 2914:11,25
October 2787:26 2788:18 2791:2 2815:19 2823:2 2884:9 2905:1 2922:1	original 2819:20	paragraph 2791:6 2804:1,3 2805:11 2806:3 2808:23 2809:17 2813:2,19 2863:23	percent 2881:17
ODEX 2898:7	originally 2819:23 2923:17	paramount 2895:11	perfect 2788:22 2828:24 2850:28 2893:25
odorant 2898:6	other's 2899:19 2901:25	Pardon 2891:24	perforations 2804:6 2847:1,4,6,10 2848:7, 11,16,17 2872:15
offer 2906:1	output 2819:14	parentheses 2794:7	
offered 2805:20 2860:2 2908:18		parenthesis 2805:16	
office 2822:24,26 2834:11,16,27 2840:23 2900:7 2901:21 2904:1 2905:8 2906:19 2914:23		part 2788:8 2790:2,9 2793:28 2795:4 2797:27 2798:4 2808:13 2810:13 2827:20 2829:17,18 2832:11 2842:3 2852:10 2862:7 2864:12 2866:3,7 2868:27 2875:21 2882:18 2894:28 2898:12 2912:6 2919:18	
offices 2821:15 2825:18 2858:14		parted 2828:2	
officially 2824:23			
offline 2921:4			
oil 2893:13 2894:4 2898:10			

perform 2809:11 2826:1 2851:17 2866:27 2873:24 2886:12	pipe 2879:24	pointing 2853:17,18	preference 2920:14
performed 2799:14 2868:20	pipeline 2840:17 2854:7 2864:8 2883:19 2894:10,21	points 2860:26	preferred 2889:21
period 2807:19 2820:12 2823:19 2825:26 2857:15 2863:25 2864:5 2867:19 2880:3 2888:5 2891:25,28	pipelines 2864:11,14, 17,24 2881:2,22	Poirier 2785:9 2789:21, 25 2790:24 2795:12,21 2799:24 2800:24,26 2801:22,24,28 2814:22 2815:4 2832:28 2833:2, 13 2855:12,21 2892:23 2914:6 2923:24,25,27	prefix 2807:8,10 2812:1,8
permitted 2904:27 2907:8 2908:8 2914:18	piping 2818:1	poles 2918:11	premature 2795:13 2911:6
person 2849:2	place 2788:9 2799:27 2801:9 2824:15 2843:4 2866:15	policies 2830:28	prematurely 2898:20
personnel 2798:7,8 2820:20 2822:15 2867:12 2894:25 2917:19,26 2918:1,2,3	plan 2799:11 2817:17 2819:9,12,13 2824:6 2844:17,23,25 2845:7 2846:2 2868:22 2871:5 2886:8,12 2916:14 2922:17,23	port 2792:14 2794:8,12, 17	preparation 2801:13 2905:28
persons 2875:7 2884:27	plane 2888:9 2889:24 2890:3	Porter 2909:6	prepare 2871:26 2906:9
perspective 2822:20 2836:19	planned 2808:3 2916:18 2923:1	portion 2835:8 2850:25 2851:4 2852:23 2873:21	prepared 2797:14 2844:27 2849:12 2869:11 2870:10,25 2872:1 2899:23,25,27 2900:23,25,27 2905:15 2906:1,14
pertain 2897:1 2906:2	planning 2868:17,21	portions 2872:27	preparing 2819:11 2822:20 2905:25 2907:1 2919:16
pertaining 2849:2	plans 2796:8,21 2808:2,7 2819:6,9 2823:27 2825:4 2832:24 2869:1 2886:2	ports 2846:17,22,23 2847:1,9 2859:21 2860:24 2872:14	present 2797:2,4 2855:3
pertains 2905:24	plants 2817:10	position 2922:20 2923:11	presented 2790:5 2824:4 2907:11 2915:28 2916:9
pertinent 2889:25	plug 2785:27 2786:2,13 2787:5,17,27 2788:16, 24 2792:9,13,21,24 2793:8,14,22 2794:14 2817:19,22,25,26 2847:11 2851:11,14,25 2852:8,11,12,13,16 2891:10	posits 2909:3	preserved 2911:28
Pete 2885:8	plugs 2787:12	possession 2916:4	press 2910:10,22
Petrizzo 2800:13 2878:2,12	plural 2796:27	possibilities 2879:22	pressing 2907:23
Phil 2805:22 2806:21	point 2795:11 2799:17, 27 2806:16 2814:27 2821:17 2841:25 2853:17 2858:3 2859:12 2860:10,20 2861:3 2864:17,26 2870:18 2871:1 2876:14,15 2879:3 2884:5 2885:24 2890:18 2891:2 2907:5, 13 2910:12 2912:19 2914:25 2918:23	post 2864:6	pressure 2808:28 2813:10 2827:7,24 2829:15 2830:17 2832:18,19 2844:3,15 2848:23 2864:14 2865:25 2866:6 2868:4, 10 2880:7 2883:27 2892:5 2893:13 2894:4, 8,12,20 2895:25
Phillips 2804:18		posted 2799:25	pressures 2881:6
phone 2893:22 2900:5 2909:25		potential 2802:25 2813:24 2861:24 2871:7,23 2878:27 2888:8	pressurized 2892:2
phoneline 2900:1		potentially 2898:14 2916:7 2918:17 2919:15	pretty 2815:16 2848:1 2878:9
photographs 2916:8		practical 2850:9	prevent 2788:26
photos 2917:6		Practically 2843:13	previous 2884:1
physical 2889:28		practices 2865:7,9 2866:3	previously 2805:15 2811:17 2837:25 2845:4 2907:11
picture 2821:9 2836:7 2857:20		pre-formal 2918:4	
pictures 2854:22		prefer 2904:12 2905:5, 16	
piece 2917:9			
PIO 2840:23			

2909:13 2912:15	prohibited 2849:15 2850:7	Purchia 2901:22,23 2902:5,12 2903:5	2921:13
primarily 2819:24 2822:1 2824:15 2870:17,23	project 2826:15	Purchia's 2899:20	quick 2791:6 2911:14, 15
primary 2814:14 2821:27 2822:22 2878:18,19 2887:5,7, 12,16	projectile 2880:16	purpose 2821:26 2840:3	quickly 2815:16 2818:11 2833:13 2856:3 2897:19
printout 2824:6	proposing 2898:5	purposely 2799:2	<hr/>
prior 2809:12 2812:27 2813:11,12,13 2828:5 2880:8	protect 2871:25	purposes 2788:14 2800:5 2804:16 2853:24 2875:2	R
privilege 2911:27 2912:1,2 2917:5	proud 2888:14	push 2848:23 2883:20	rain 2821:24
problem 2790:15 2793:8,10 2805:23 2806:6 2857:7 2893:16	provide 2811:5 2851:23 2855:5 2869:18 2900:8 2906:27 2909:25,26 2910:3,23 2913:6 2916:15,27 2917:4,25 2919:9,26	put 2786:12 2794:13 2798:10 2813:5 2815:18 2829:25 2836:25 2839:6 2883:18 2898:10 2899:12 2906:17,22 2909:18	raise 2855:18 2874:19, 23 2904:16 2922:13,16
problematic 2905:18	provided 2793:4 2811:18 2832:2 2854:17 2857:17,19 2868:1 2872:21 2873:1 2909:23 2910:4,7 2913:28 2915:21 2917:24 2919:11	Putte 2791:2 2793:4 2802:17 2807:16 2815:20 2859:16	raised 2790:10 2904:23 2905:24 2906:7 2915:13
problems 2895:9	providing 2844:19	putting 2871:5 2895:8 2898:8	ran 2853:6 2863:17 2869:17
procedure 2843:1,20, 21	provisos 2917:2	<hr/>	Ranch 2909:7
procedures 2851:22	PS-20 2838:10	Q	Randy 2854:1 2855:5,6 2856:28
proceed 2876:22 2889:12	PS20 2858:17	question 2787:2,4 2796:4,26 2797:1 2811:4,10,13 2829:5 2836:27 2837:15 2847:20 2848:15 2855:17 2857:11 2862:21 2865:14 2876:18 2888:27 2894:6,14 2896:1,16 2897:19,22 2900:6 2910:9 2911:11 2918:6 2923:1	range 2811:27,28 2870:20
proceeding 2785:1 2786:27 2864:7 2897:1, 16 2901:7 2913:12,27 2920:11	PSEP 2864:9,13	questioned 2859:11 2861:11	rate 2804:7 2863:28 2864:2,4 2865:10 2866:11
process 2826:13 2827:14 2830:14 2842:3 2845:23 2846:1, 5 2854:10,23 2868:9 2871:11,13 2876:10 2923:9,21	Public 2834:11,15,27 2841:28 2900:6 2901:21 2904:1 2905:8 2906:18 2914:23 2921:23	questioning 2861:15 2882:15 2883:2 2897:2	rates 2824:14 2825:2,3
produce 2908:19 2911:24	published 2805:18	questions 2790:25 2795:26 2814:19 2832:27 2837:1 2840:1 2851:3 2870:8 2882:11 2891:26 2892:20 2894:8 2897:9 2898:17 2908:2 2909:21,22,27 2912:12,20,23,27 2914:13 2915:10	RCA 2853:27
produced 2908:14	PUC 2836:4		re-running 2813:14
production 2870:4,5 2904:25 2907:16 2915:4,22,26 2917:11 2918:7 2919:13	pull 2786:20 2799:15 2813:8 2828:28 2835:2 2845:1 2850:27 2869:6 2871:14 2873:9		reach 2806:11
profile 2787:11 2788:11 2882:3	pulling 2919:14		reached 2899:17
program 2808:25 2813:6 2845:22 2864:8, 9,13,19 2865:9 2866:8, 10,12,15 2890:20	pump 2817:24 2824:14 2825:2 2838:13 2845:27		read 2804:9,10 2848:3 2901:26,27
	pumping 2813:28 2868:24 2872:13		reading 2789:19 2800:5 2902:10
	purchased 2881:18,19 2883:23		reads 2830:13,17
			ready 2834:19 2907:6
			real 2909:5
			realize 2887:20
			reargue 2915:27
			reason 2845:10 2856:13
			reasons 2918:1

rebuild 2813:11	2874:11 2886:15,17 2919:14	regulator 2822:22	remotely 2817:18,27
recall 2785:26 2786:10, 15 2787:25 2791:11 2806:18 2815:21 2825:13 2829:13 2863:4 2890:19,21 2893:11 2894:2,18,23, 24 2895:14 2912:4 2914:7,18	recross 2888:21 2889:8 2892:20 2893:5 2908:9	regulatory 2840:24	removed 2848:2,4 2869:14
recalled 2909:24	RECROSS- EXAMINATION 2889:14 2893:9	relate 2891:26 2914:15	repeat 2900:18 2907:10
receive 2908:10,17	redact 2917:4	related 2796:3 2798:6 2806:13 2862:9 2864:13,19 2895:12 2904:23,28 2912:24,25 2915:25 2916:4 2917:27 2920:9	repeated 2919:4
received 2795:3 2868:7 2894:22 2901:15,16,18 2903:17, 19,20,22,23,25,27 2914:20	redacting 2919:15	relates 2883:1 2915:19 2918:6	replace 2823:17
recent 2814:16 2904:13	redirect 2833:5,10 2834:13,22 2876:17 2877:10,19,25 2882:28 2889:9,18 2890:25 2892:7 2894:15 2896:18	relationship 2837:22 2896:21	replaced 2848:5
recess 2801:27 2833:18 2877:16 2889:5	reduce 2868:3 2883:27	relationships 2840:9, 10	replacement 2865:26 2866:6
recognize 2835:7 2845:6 2866:2	reducing 2868:10	relevance 2911:25	replacing 2864:14
recommend 2810:8 2813:5	redundant 2838:2	relevant 2862:22 2906:10 2911:10 2913:11,26	reply 2845:3 2923:8
recommendations 2806:5,12 2864:1	refer 2803:21 2852:7 2873:25	reliability 2810:6,15,18 2866:21,22,24,25 2867:2,6 2884:18,19	report 2803:19,21,22 2822:21 2835:4 2850:22 2869:8,11,27 2870:9,26 2878:22,28
recommending 2810:16	reference 2869:24 2892:15 2895:10	reliable 2817:14	reporter 2855:16,27 2856:9,12,23 2892:28 2893:17 2900:2
record 2785:10 2789:21,23,24,26 2790:21 2794:26 2795:2,8,14 2800:22, 24,25,26 2801:22,23, 24,26 2802:1 2803:17 2805:2 2812:17 2814:23,24,26 2815:2, 3,4 2832:28 2833:1,3,7, 11,12,14,16,17 2834:8 2835:5 2837:9 2845:5 2855:18 2856:20,22,24 2874:14 2877:14,15,18 2889:3,4,7 2891:25 2899:7,9,11 2900:15 2901:7 2902:11,17 2903:4 2914:20 2918:25,26,28 2919:1 2921:18 2922:5	referenced 2851:14 2856:1	relied 2816:26 2827:18	reporter's 2786:26
records 2811:25 2872:20 2873:22,23	referencing 2890:22	relief 2801:13,18 2803:2 2814:5 2818:15 2823:6,7,10 2836:18 2838:11,16,17,20,22 2839:17 2858:18 2868:14,17,23 2870:17, 24,27 2871:5,10 2872:5,11 2878:20 2879:2,8 2885:21 2921:27 2922:9	reporters 2856:10
	referred 2847:2 2852:13 2857:1 2870:1 2895:18 2904:2	reliable 2817:14	reporting 2840:1,9,25
	referring 2801:12 2844:8,13 2851:10 2863:6 2869:28 2873:26 2876:25 2891:20 2895:19,22	relied 2816:26 2827:18	reports 2822:21
	refers 2794:7 2803:5 2863:27	relieve 2913:5	reports 2822:21
	reflected 2849:1	relieving 2893:13 2894:4,8	representations 2827:11
	refresh 2808:28	rely 2828:13 2894:11	representing 2834:15
	regard 2787:20 2794:4 2816:14 2829:10 2831:15 2832:4 2862:12 2864:10 2870:17 2879:8 2895:6 2898:6	remained 2892:2	request 2807:4 2810:26 2811:19,20 2869:12 2902:16 2904:24 2905:12 2913:2,11 2916:3 2917:13 2920:7
	regular 2821:28 2822:6 2842:10 2879:25	remaining 2904:26 2908:10	Request-33 2790:3 2795:4
		remember 2788:1 2864:4 2876:6,11 2883:7	requests 2907:28 2908:1,6 2910:6,7 2913:7
		remote 2818:1 2820:15	require 2814:4
			requirements 2823:15
			requires 2919:14
			research 2810:1
			reservoir 2827:7,23 2832:18 2844:3,15 2847:5,7 2852:16

2868:3,10 2880:7,22 2882:17 2883:10,27 2884:7 2895:6,7 2896:16	resulting 2804:7	rope 2850:2	2863:15,16,23
residents 2909:6	results 2819:3,5 2823:23,26 2824:1 2827:16,21	ropes 2849:27	sat 2798:12 2875:10
resolve 2909:17 2914:5 2916:27	resume 2877:10,19	Ross 2855:28 2856:4,7, 12,13	Saturday 2805:24
resource 2816:17	resumed 2785:6,20 2834:4 2877:25	rounds 2913:4	scan 2890:10
resources 2819:26 2821:1 2840:19,21 2911:1	return 2833:5 2877:10	routine 2843:2,11 2851:11	scenario 2828:25
respect 2816:15 2845:9 2847:14 2866:18 2899:18	returning 2802:1 2815:5 2889:2	Rudy 2812:17,22 2861:13	schedules 2905:14 2911:3
respond 2809:7 2841:10,21 2865:1 2872:1 2913:17 2922:22	reverse 2807:26	ruled 2911:8	schematic 2849:1
responded 2808:18 2888:14 2897:25 2899:20 2907:28 2908:5 2909:22	review 2789:13 2805:1 2815:23 2819:9 2829:5, 11 2851:4,6 2872:28 2875:22 2911:19,21,28 2915:6 2918:19	ruling 2864:16 2916:15	schematics 2844:5 2849:5,9
responding 2841:8 2907:27	reviewed 2807:23 2819:3 2823:23 2891:6 2907:12	rulings 2920:12	Schwecke 2785:5,16, 22 2786:6 2788:13 2790:1,28 2791:11 2794:6,22 2795:25 2797:1 2800:8 2802:11, 21 2804:22 2806:10 2810:24 2812:11 2814:20,21 2815:1,7,11 2829:4 2832:26 2833:6 2834:3,12,24 2835:7 2838:1 2855:20 2856:1, 27 2857:12 2859:10,25 2860:3,11,14,19 2862:27 2863:1,10 2864:24 2865:7,22 2867:14 2869:10 2876:24 2877:11,27 2882:26 2883:5,8 2884:24 2888:17 2889:16 2893:11 2894:2,18 2895:24 2896:9 2897:22 2898:16,25 2899:3,24 2900:23,26,28
responds 2809:22 2811:12	reviews 2911:28	run 2808:27 2809:2 2813:9 2826:6 2830:2, 23 2831:1 2853:6,19 2869:15 2874:15 2877:2	scope 2837:1,6 2864:22,25,27 2889:9 2890:25 2894:15 2896:18,19,23 2910:11 2915:25 2916:3
response 2790:2 2808:11 2809:10,24 2810:25 2811:19,20 2837:17 2840:6,10 2860:7 2882:21,22,23 2883:6 2894:27 2897:3 2900:9 2901:9 2906:20, 27 2911:15 2913:2 2915:11	Rick 2804:18	running 2813:12,13 2825:24 2826:22 2839:3	scoping 2864:16 2909:10 2923:5
responses 2913:6 2914:8 2917:24	rig 2839:7 2865:27 2866:7	Sacramento 2822:24	Scott 2805:21 2806:21
responsibility 2849:22 2850:3	right-hand 2853:2	safe 2895:2,6	screen 2786:22 2805:6 2845:25
responsible 2805:12 2826:22	rights 2881:23 2883:24	safely 2887:9,13,14,25 2895:15 2896:3 2897:26	scroll 2789:3 2800:6 2802:9 2803:24 2804:15 2805:5 2807:6, 12 2808:10 2865:17 2867:27
responsive 2904:26 2908:21,23 2910:25 2913:11 2918:21	road 2836:2 2838:18,28 2839:7 2853:3,5,13 2857:25	safety 2786:14 2787:7, 9,13 2788:6,10,17 2792:14 2793:17,22,27 2794:1,14 2796:16 2811:7 2813:7,15 2817:22 2826:16 2849:22 2852:8,13,14, 16 2855:2 2858:7 2862:8,13 2864:8 2884:2,4 2894:25 2895:10,19,26 2896:2, 5,11,23 2897:24 2898:2,3,13 2922:3,5, 12	
responsiveness 2911:18,22 2915:7	roads 2836:20 2850:1		
result 2892:12	roadway 2853:1		
	RODGER 2785:5 2834:3		
	Roger 2899:24 2900:23,25,28		
	role 2812:28 2817:2 2823:7		
	roles 2822:14 2826:19		
	Rolly 2818:14 2823:12 2885:14		
	roof 2835:27		
	rooms 2821:15		
	root 2828:26 2835:4 2850:19 2855:11 2857:16 2858:1		

scrolling 2809:5 2813:19	SED-316.001 2810:23	seventh 2885:27 2886:2	significant 2794:13
seal 2865:25	SED-316.012 2811:2	severe 2814:7	similar 2866:13 2878:21,23,24
sealed 2835:17	SED-317 2812:4 2902:15	shack 2836:2 2849:26	similarly 2872:5 2921:10
seals 2809:1 2813:11	SED-318 2902:15	Shackelford 2839:23 2873:15 2885:12	Simon 2884:15
season 2884:9,10	SED-319 2902:15	shaking 2904:14	SIMP 2864:20,24
section 2801:6 2840:23 2841:1 2842:10 2921:23	SED-320 2902:15	share 2827:3,10 2831:5 2907:24	simple 2882:27
SED 2785:15 2797:12 2814:18 2834:10 2837:8 2849:22 2850:4 2852:23 2853:22 2854:25,28 2855:3 2857:13,14,19 2858:23 2860:9 2876:1,3,27 2889:8 2899:17 2901:21 2902:26 2905:7,24,25 2906:3,13 2916:6 2917:17,19,24, 25,26 2918:3,16 2921:19 2922:12	SED-321 2902:15	shared 2889:19 2890:11	simply 2911:23 2913:1, 13,15 2915:19
	SED-322 2902:16	shares 2805:6	simulate 2801:6
	SED-323 2788:28 2815:18 2859:9 2902:16 2903:16,26	sharing 2863:13	single 2840:15
	SED-DATA 2810:26	sheering 2862:4,16 2863:12,13,14,18	sit 2839:24 2854:8
	seismic 2861:26	shelter 2821:23	site 2799:5 2821:9,20 2822:7,16 2826:21 2838:13 2842:1,17,20, 23 2849:24 2852:1,23 2854:25 2858:18 2875:23,24,25,26 2876:4
	send 2831:7 2895:3	shift 2863:17	sites 2822:13
	sending 2855:14	short 2802:1 2877:18 2898:26 2899:11 2904:11	sits 2859:4,5 2870:6
	senior 2826:18 2830:7	shorter 2799:19	sitting 2829:6
	sense 2826:24 2901:27	show 2786:19 2795:2 2829:12 2830:25 2831:24	situation 2788:20 2796:10 2797:21 2801:16 2818:4 2827:28 2843:22 2851:19,21 2878:27 2880:5,13
SED's 2790:3 2863:3 2918:3	sentence 2792:26 2794:6 2804:1 2809:17 2810:3 2865:22	showed 2801:7 2818:13,16 2829:14,20 2835:17,19 2884:24	Sixty 2881:16
SED-218 2799:16 2877:23 2902:12 2903:7,17	separate 2797:10 2820:21 2907:14 2913:1	showing 2808:11 2836:26 2845:25	size 2840:14
SED-219 2884:23 2902:13 2903:8,19	separately 2905:5 2912:3 2915:3 2920:26	shown 2791:20 2795:1 2802:12,24 2803:9 2804:15 2805:25 2850:25 2851:1 2877:27	Slagel 2885:8
SED-258 2902:13 2903:10,20	September 2909:11	shows 2786:26 2794:27 2801:4 2808:12 2836:19 2885:14	slightly 2813:19 2863:5
SED-276 2869:7 2902:13 2903:11,22	served 2788:28 2789:10,16	shut 2891:9,14,17,22	slippage 2862:3
SED-281 2870:9 2902:13 2903:13,23	service 2855:14 2867:7	Shutoff 2803:6	slots 2846:8,10,13,15, 22,28 2847:14,18 2848:6,10,16,17
SED-310 2902:13 2903:14,25	Sesnon 2821:12	side 2836:2 2838:28 2842:9 2853:2,3,5,16 2855:13 2910:23	sloughed 2880:18
SED-312 2902:14 2903:16,26	SESSION 2834:1	sides 2850:1	slower 2857:5
SED-313 2802:5 2902:14	set 2787:12 2788:24 2789:12 2792:8,12,21 2793:14,21 2809:2,27 2811:22 2813:7 2817:26 2839:1 2847:11 2851:14,24 2862:12 2891:10 2917:7 2923:11		slowly 2856:18 2901:27 2902:11
SED-314 2804:12 2867:10 2902:14	setting 2792:24 2793:8 2817:18,22,25 2851:10		small 2840:16 2850:25
SED-315 2807:2 2902:14	seven-minute 2899:2		
SED-316 2810:20 2902:14			

Socalgas 2786:12 2788:15 2790:20 2795:5,9 2796:3 2798:7,24 2804:19 2806:11 2810:25 2811:5,7,12,17,23,24 2816:1,20 2817:21 2818:20 2822:1 2832:1 2833:6 2841:24 2849:4, 12,14 2858:23 2860:2 2866:4 2867:12 2873:12 2878:2,12 2880:21,27 2882:16 2887:18 2892:11 2896:24 2897:6 2900:8 2901:6 2902:23 2908:7, 16,27 2909:9 2910:10, 15 2911:20 2912:17 2917:11,24,25 2921:4 2922:6	Socalgas' 2790:2,11 2811:22 2880:25 2917:13	Socalgas's 2843:1 2907:27 2909:3,21 2912:26	Socalgas-02 2899:23 2900:22 2901:10,14	Socalgas-09 2845:2	Socalgas-23 2899:25 2900:24 2901:11,16	Socalgas-24 2899:26 2900:27 2901:13,17	soil 2854:3	solely 2864:16	solution 2868:3,6,13, 15,24,25	Solutions 2803:19 2868:2	solve 2805:22	solving 2806:6	sooner 2880:22 2882:17,19	sort 2916:10	sounds 2872:3 2923:22	source 2816:13	sources 2888:8	south 2838:28	Southern 2921:24	space 2846:24 2858:14	speak 2829:22,25 2856:18 2905:11,13,15 2907:19	speaking 2856:3,7	specialist 2826:17,19 2830:7	specialized 2823:10	specific 2796:25 2797:9 2851:2 2917:7 2923:12	specifically 2788:7,19 2806:27 2816:25 2821:19 2825:13 2865:13 2890:21 2919:9	speculate 2910:14,17	speculating 2859:25 2860:12	speculation 2859:24	speed 2872:24 2889:27	spell 2856:28	spelled 2857:2	spend 2838:3,6	spent 2838:7,9	Sperry 2823:11 2838:21 2839:20	split 2828:3	spoke 2835:1	SS 2821:11	SS-1 2838:11	SS-25 2786:14 2787:18,27 2788:18 2791:8 2793:18 2799:4 2802:26 2803:3 2816:4, 16,28 2821:9,18 2822:19 2835:14,18 2838:9 2846:9 2847:19, 26 2849:2,14 2855:7 2867:20 2868:25 2869:14 2872:20	2875:24 2879:12 2891:3,12,14 2892:1 2921:26 2922:8,10,11	SS-3 2857:27 2858:8	SS-39 2836:17	SS-9 2798:13 2835:19 2836:9 2839:12 2855:8	SSSV 2786:13 2787:18 2793:17 2809:2 2810:4 2846:8 2847:18,25 2862:14	SSSVS 2809:27 2810:8,14 2811:23,26 2866:20	stable 2792:13 2793:22	staff 2825:16 2832:1 2842:5,6	staff's 2910:14	staging 2835:20	stamp 2800:5 2808:12 2811:2	stand 2785:6 2834:4 2882:23 2910:28	standard 2821:11 2843:3,7,10,17,20 2897:13	standards 2843:8 2851:23	standby 2792:8,21	standing 2831:21	standpoint 2820:17 2852:4 2867:3 2879:8	start 2809:28 2833:5 2845:26 2846:5 2852:28 2868:14 2880:21 2881:26 2883:9 2885:2 2899:14	started 2814:15 2855:10 2868:9,18,21 2876:6,10 2884:3 2896:16 2916:7	starting 2787:2 2798:13 2804:2,3 2805:23 2808:23 2813:2,20 2815:6 2837:14 2919:6	starts 2805:10 2811:15 2884:10	state 2787:19 2901:8	stated 2817:17	statement 2787:22,24 2792:5 2794:11 2801:11 2808:9,13 2809:4 2813:17 2860:22 2861:7 2913:10	statements 2787:15 2909:17	states 2792:6 2909:8 2912:13	status 2791:7 2906:12 2914:24	stay 2836:28 2894:15 2906:18	step 2845:23	step-by-step 2824:7 2846:1	steps 2799:13 2846:3 2853:27 2876:9 2887:22	stick 2860:15	stipulate 2790:20 2899:22 2900:7,13	stipulated 2901:5,25 2902:20	stipulates 2902:23	stipulation 2900:20 2920:24	stipulations 2899:18	Stoddard 2855:13,15, 27 2904:16,18 2905:24, 28 2906:20,21,25 2909:20 2911:16,17 2913:19 2914:16,17 2915:1,18 2917:15 2919:24 2920:2,4 2923:3	stolen 2825:9 2831:3	stop 2787:28 2884:15 2893:14 2910:12	stopped 2849:20
---	--	--	--	---------------------------	--	--	--------------------	-----------------------	--	------------------------------------	----------------------	-----------------------	-------------------------------------	---------------------	---------------------------------	-----------------------	-----------------------	----------------------	-------------------------	------------------------------	---	--------------------------	--	----------------------------	--	--	-----------------------------	---------------------------------------	----------------------------	------------------------------	----------------------	-----------------------	-----------------------	-----------------------	--	---------------------	---------------------	-------------------	---------------------	---	--	----------------------------	----------------------	--	--	---	-------------------------------	---	------------------------	------------------------	---------------------------------------	---	---	------------------------------------	--------------------------	-------------------------	---	--	--	---	--	-----------------------------	-----------------------	---	--------------------------------------	--	---	--	---------------------	--------------------------------------	--	----------------------	---	--	---------------------------	---------------------------------------	-----------------------------	--	-----------------------------	--	------------------------

storage 2805:12 2807:20 2808:26 2811:7,23 2812:26 2816:5 2817:1 2822:23 2835:8 2861:21 2864:12,19 2865:27 2866:7,9,12 2867:5 2881:9 2883:15 2887:16 2921:25	2891:10,14,22	temperature 2817:6	2921:6
stored 2831:2	surprise 2826:20	tens 2854:22	thoughts 2797:22 2827:4 2886:10,14,19 2907:24 2920:28
stray 2837:14	surrounding 2851:7	tentative 2915:20 2917:1	thousands 2854:22 2909:6
straying 2836:24,26	survey 2888:11	term 2788:8 2825:5 2836:14 2852:17 2911:5	thread 2807:25
structure 2832:5 2840:2,4,5 2841:5,7,11	surveys 2817:6	terminology 2839:3	three-page 2807:9
studied 2805:18	Susana 2861:27 2862:3 2863:16,24	terms 2912:3	tie 2865:12 2920:7
subject 2802:24,27 2803:5	switched 2856:10	test 2808:28 2813:10 2864:13	tied 2832:23 2865:14
subsidiary 2820:28	sworn 2845:11	tested 2898:10	time 2795:18 2796:12 2798:18 2799:6 2806:17 2807:19 2814:15,18 2818:8,9, 18,21,25 2823:1,19,21 2825:26 2828:5,14 2830:20 2833:4 2838:3, 6,7,8,10 2841:10 2843:4,16 2847:2 2848:19 2851:15 2854:26 2857:15,26 2861:3,20 2863:26 2864:5,17 2866:16 2867:22 2868:7,17,22 2869:3 2870:18 2871:19 2873:6 2877:1, 7 2878:7,17,20 2879:18 2880:2,3 2884:8,13 2887:7,8,20 2888:5,9, 12 2891:25,28 2898:25 2906:17 2907:2 2910:14 2911:1,19 2912:10 2914:8 2915:5, 8,22 2917:5 2918:15,19 2919:12 2922:16 2923:16,19
substance 2922:16	sync 2882:1 2883:17	testify 2860:3	times 2798:20 2825:4 2835:15 2854:6 2857:1 2878:10 2882:25 2918:15
subsurface 2786:14 2787:6,9,13 2788:10 2793:17,28 2805:14,19 2811:6 2813:25 2814:2 2862:8,12	system 2788:9 2840:7, 12,15,17 2841:22,25 2842:2 2880:25,27 2881:4,17,24 2882:18 2883:19 2884:19	testimony 2786:16,19 2820:2 2837:13,14,16, 20 2845:3,11 2850:26 2851:13 2862:27 2882:10 2884:2 2891:4 2895:1 2899:24,26,28 2900:23,25,28 2909:24 2914:1 2920:20	timing 2824:9 2915:19
successful 2823:5	takes 2845:18 2886:9	testing 2864:14 2865:25 2866:6	title 2902:9
successfully 2803:2	taking 2801:8 2812:27 2814:26 2830:13 2833:15 2852:23 2854:10,12,21	Texas 2818:26 2819:1, 17,24 2820:4,23 2825:14,17 2881:21 2889:23	today 2815:16 2834:9 2835:2 2839:9 2848:20, 25 2859:5 2877:28 2887:3 2888:3 2902:4 2904:10 2905:17 2916:15 2920:1,9
sudden 2871:18	talk 2796:8 2808:1 2824:11 2831:18 2844:1 2857:5 2861:18 2885:3 2921:3	theft 2825:11	Todd 2791:1 2793:4 2802:17 2807:15
suddenly 2867:4 2871:17	talked 2823:25 2825:27 2827:19 2847:15 2862:11 2871:6 2878:25 2885:10,16,28	theories 2879:13,21	
sufficient 2804:7 2821:21 2871:27	talking 2808:25 2824:12 2844:2 2848:10 2865:8 2891:24 2918:18	theory 2878:24 2879:11,23	
suggesting 2908:17	talks 2811:11 2863:23 2878:26	thing 2795:18 2881:28	
suggestion 2810:13	tanks 2836:8	things 2797:23,24 2831:18 2844:2 2854:7 2878:19 2886:22,24 2887:27 2898:27	
summary 2791:7	target 2803:3 2879:3	Thomas 2791:1	
support 2850:17,21 2908:8,24	Taul 2908:9 2911:4	thought 2805:17 2808:5 2862:7 2907:23	
supposed 2866:28 2896:17	team 2841:20 2888:14		
Sur-reply 2899:26,27 2900:25,28	technical 2826:5 2870:21		
surface 2798:2 2814:4 2817:9 2852:16 2853:28 2854:8 2869:28 2870:2,3,6 2871:16,21 2880:11	telling 2855:16		

2815:20 2859:15	2871:1	2830:21 2846:13	Van 2791:2 2793:4
Todd's 2793:5	transpiring 2843:16	2855:20 2856:6 2874:6	2802:17 2807:16
Tom 2793:9 2815:20,27	travels 2845:14	2889:18 2891:5	2815:20 2859:16
2816:5,13,17,19	tree 2853:15 2891:16	2895:28 2896:2,6,23	variety 2796:5
2817:7,13,15 2851:20	true 2913:13,15	2915:3,27 2916:6	vary 2818:9 2844:2
2859:14,18 2861:5	trust 2870:19	2917:10	venture 2854:21
Tom's 2817:1 2859:26	tubing 2785:27	understanding 2794:2	verbal 2797:18
tomorrow 2905:13	2786:13 2787:6	2798:4 2800:17	2831:12,28 2832:13
2906:12	2792:10,15,28 2793:6	2825:19 2846:21	version 2824:18
tools 2869:16,17	2794:8,19 2813:9,14	2851:9 2860:4,12	versions 2872:26
top 2789:4 2790:28	2846:20,25,26 2847:8,	2892:9 2906:26	versus 2843:11
2800:7 2802:9,13	11,12,23 2848:11,14	2916:26 2917:1,3,16	vicinity 2835:14
2804:16 2806:25	2859:20 2860:28	2919:13	2868:4,11
2807:12,28 2810:23	2869:15 2872:14	understood 2794:5,21	view 2822:18
2835:18 2848:18	2892:1	2795:23,27 2798:21	viewed 2842:21
2872:6,7,11 2879:5	tubing-casing	2800:1 2809:16 2813:1	views 2835:13
2891:17 2898:9	2846:26	2814:17 2841:4 2846:6	violated 2909:10
2921:26 2922:7	tubulars 2858:19	2891:4 2892:18	violation 2921:21,22
top-kill 2825:21 2879:9	turn 2810:19 2813:1	2917:14 2922:18,25	violations 2896:28
topic 2876:19	2822:25 2891:2 2895:3	Unified 2841:19,20,24	2897:15
Traci 2834:16 2905:10	turned 2898:19	2842:1	VIRTUAL 2785:1
trailer 2798:12 2826:1	turning 2805:28 2811:1	United 2909:8	visitors 2822:6
2838:17 2839:13,16,25	2890:18 2919:15	unlike 2852:2	visual 2822:20 2827:11
2857:14 2858:9,17	turns 2857:25	unqualified 2917:22	2855:6 2857:11
2873:4 2874:3 2875:10	type 2826:7 2844:6	unreasonable	2875:23,26 2876:3
trailers 2798:16	2878:27	2908:27	void 2886:21
2821:6,14,22,25,28	typical 2841:22	unreliable 2866:28	voids 2801:7
2822:8 2825:27	typically 2822:16	unsuccessful 2868:20	Volume 2786:28
2835:22,26,28 2838:6,	2824:4,28 2826:6	unusual 2857:8	
7,24,27 2839:1,2,11	2841:12 2861:25	update 2791:20	
2854:17 2855:8	2884:11 2911:27	urge 2910:11	
2857:17,18,23,28		Utilities 2921:23	
2858:24		utilize 2883:15	
transcript 2787:21			
2891:7 2909:28			
transcripts 2786:17,			
24,26			
transient 2819:4,6			
2823:24 2824:20,22,25			
2825:5 2845:11			
transitioned 2838:16			
translate 2867:1			
transmission 2864:11			
2866:14 2880:28			
transparency 2913:23			
transpired 2842:21			
	U		W
	Uh-huh 2853:8	V	W-E-I-B-E-L 2812:18
	ultimate 2840:27	vague 2894:6	waiting 2869:9
	ultimately 2799:10	Valley 2881:4	waived 2920:22
	2817:27 2832:4	valve 2786:14 2787:7,	2921:11
	2844:22 2864:20	9,13 2788:10 2793:17	walk 2821:17 2822:18
	2867:6 2886:7,10	2794:1 2813:15 2848:4	2824:7 2884:26
	unable 2871:21	2865:26 2866:6,25,26	walked 2824:16
	underground 2822:23	valves 2809:1 2810:6	2870:10
	understand 2798:9	2811:7 2813:7 2862:8,	Walzel 2822:27
	2820:19 2825:23	13 2867:3 2891:23	2823:21 2824:24
	2827:15 2828:10		2825:6,16,24 2826:9

2827:18 2829:28 2831:5 2832:3	2818:3	2863:26 2873:5 2885:17 2917:20,25,27
Walzel's 2825:8,20 2830:22	wellness 2865:25	working 2814:15 2816:3 2818:7 2821:6, 28 2826:2 2839:10 2840:25 2874:3 2917:20 2918:16
wanted 2785:24 2793:5 2821:17,21 2857:18 2859:2 2863:11 2869:13 2870:28 2874:11 2875:23 2889:26,28 2906:26 2907:19 2917:12 2923:12	wells 2805:13 2808:26 2813:8,27 2817:3,4,8, 12 2821:10 2823:10 2862:4,5 2864:12 2885:13 2890:19 2895:4	works 2880:25
wanting 2871:13	Western 2792:7,20,22 2869:16	world 2845:15 2870:15
warned 2922:11	white 2836:16	world-renown 2830:4
washout 2878:23 2879:1	wide 2870:20	world-renowned 2845:14
washouts 2871:7	Wild 2885:6	Wright 2839:22 2873:15 2885:1,2,4
waste 2910:13 2911:1	wind 2821:24	writes 2879:11
Water 2803:6	winding 2836:20	writing 2908:12 2913:23 2919:9
Wayne 2885:19	winter 2884:9	written 2799:9 2916:16 2922:23,24
ways 2912:16	wireline 2786:13 2787:5,11,17,27 2788:16,24 2792:7,12, 20,22 2793:21 2817:6, 25,26 2851:25 2852:11, 12 2869:16	wrote 2867:23
weather 2821:24	withdraw 2882:18	WSO 2802:26 2803:5 2804:6
week 2915:25 2916:10	withdrawal 2817:3,5 2883:16 2884:15 2895:8 2896:4,15	WSOS 2871:8
weeks 2923:6	withdrawals 2868:11 2880:6 2881:13 2884:4	<hr/> Y <hr/>
Weibel 2812:18,22 2861:13	withdrawing 2880:22 2881:26 2882:16 2883:10	year 2808:3 2831:15
well-control 2821:2 2824:27 2826:12,17 2846:12 2887:6	witnesses 2790:11 2904:25 2907:8,15 2909:19 2910:1,27 2912:4 2913:28 2914:7, 18	years 2805:13 2816:22, 24 2918:18
well-kill 2786:3,5 2788:26 2791:13,20,22 2792:3 2795:26 2796:3, 8,20 2798:6 2816:3,8, 10,11 2817:24 2818:7, 19 2819:6,8,13 2822:7 2823:4,27 2824:6,21 2829:7 2830:5 2832:24 2842:16,25 2843:9 2844:17,23,25 2845:7	word 2795:15	yesterday 2785:15,25, 26 2787:25 2791:12 2820:2 2835:2 2842:28 2846:7 2849:12 2869:23 2870:11 2872:19 2880:21 2884:25 2887:2 2907:3
well-renowned 2826:11	words 2810:7 2851:16	<hr/> Z <hr/>
wellbore 2794:4 2844:4 2849:8 2879:24 2880:10	work 2794:18 2809:12 2815:28 2817:5,8 2819:15 2831:10 2838:20 2866:26,27 2916:7	Zan 2845:28
wellhead 2809:1 2813:11 2817:28	worked 2807:19 2816:20 2834:28 2835:22 2861:22	