SoCalGas-80

Examination Under Oath of Danny Walzel and James Kopecky (Aug. 8, 2018)

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BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE

STATE OF CALIFORNIA

Pre-Formal Inquiry into California Gas Management, Practices and Procedures Related To The Aliso Canyon Incident in October, 2015.

EXAMINATION UNDER OATH OF DANNY WALZEL and JAMES KOPECKY

CONFIDENTIAL

REPORTER'S TRANSCRIPT
San Francisco, California
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PUBLIC UTILITIES COMMISSION, STATE OF CALIFORNIA
SAN FRANCISCO, CALIFORNIA

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE
STATE OF CALIFORNIA

IN THE MATTER OF THE PRE-FORMAL INQUIRY INTO CALIFORNIA GAS MANAGEMENT, PRACTICES AND PROCEDURES RELATED TO THE ALISO CANYON INCIDENT IN OCTOBER, 2015

Appearances:

(Examination Under Oath, August 8, 2018)

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PUBLIC UTILITIES COMMISSION, STATE OF CALIFORNIA
SAN FRANCISCO, CALIFORNIA

I N D E X

BE IT REMEMBERED THAT, by Consent of the Witness, and on Wednesday, August 8, 2018, commencing at the hour of 10:10 a.m. thereof, at the offices of the CALIFORNIA PUBLIC UTILITIES COMMISSION, 505 Van Ness Avenue, Room 4300, San Francisco, California 94102, before ANDREA L. ROSS, CSR No. 7896; SHANNON M. ROSS, CSR No. 8916; and DORIS HUAMAN, CSR No. 10538, personally appeared

(DANNY WALZEL),

called as a witness herein, who, being first duly sworn, was thereupon examined and interrogated as hereinafter set forth, and

(JAMES KOPECKY),

called as a witness herein, who, being first duly sworn, was thereupon examined and interrogated as hereinafter set forth

* * * * *

EXAMINATION

BY MR. GRUEN:

Q For starters, why don't we go around the room and just identify your name and spell your name, please, for the record. We'll ask everyone to do it and then your title and then the name of the entity who you work for.

My name is Darryl Gruen, D-a-r-r-y-l, G-r-u-e-n. I'm an attorney for

the Safety and Enforcement Division of the California Public Utilities Commission.

MS. ROSE: My name is Julietta Rose, J-u-l-i-e-t-t-a, R-o-s-e. I am a law clerk for the legal division.

MR. BRUNO: My name is Kenneth Bruno. I'm the program manager of gas safety branch, Safety and Enforcement Division here at the California Public Utilities Commission.

MR. SHER: Nicholas Sher, S-h-e-r, with the Safety and Enforcement Division, attorney.

MR. HOLTER: Randy Holter, R-a-n-d-y, H-o-l-t-e-r. I work for the Safety and Enforcement Division. I'm a senior utilities engineer specialist.

MS. PENNINGTON-HILL: Kaitlyn Pennington-Hill, K-a-i-t-l-y-n, P-e-n-n-i-n-g-t-o-n hyphen H-i-l-l, attorney for Halliburton.

MR. HELSLEY: Michael Helsley, M-i-c-h-a-e-l, H-e-l-s-l-e-y, attorney at Wanger Jones Helsley and an attorney for Halliburton and Boots & Coots.

WITNESS KOPECKY: A James Kopecky, K-o-p-e-c-k-y. I'm a well control specialist for Halliburton, Boots & Coots.

WITNESS WALZEL: A Danny Walzel,

D-a-n-n-y, W-a-l-z-e-l, well patrol engineer for Boots & Coots, Halliburton.

MR. GRUEN: Q Mr. Kopecky and Mr. Walzel, thank you very much for being here today. We appreciate that. We understand that you're here voluntarily and you're here with your counsel voluntarily. I just -- I spoke with counsel off the record and just wanted to clarify for the record, we understand that what we discuss today, just the actual points of discussion today, that there's an agreement to keep that, keep the points for the discussion confidential.

Counsel, did I capture that right?

MR. HELSLEY: Yeah, that's fine. I agree with that.

MR. GRUEN: Okay.

MR. HELSLEY: Also, I just want to let everyone know that SoCalGas, they were -- they helped bring the witnesses here today and helped facilitate this. Just wanted to let -- I just wanted to put that on the record.

MR. GRUEN: Q Appreciate that. Thank you. Let's see. With that, just a couple of points of clarification before I turn it over to Ms. Rose.

Gentlemen, Mr. Kopecky and

Mr. Walzel, do you have any concerns with sharing information related to your work at Aliso Canyon on well access 25 today?

WITNESS KOPECKY: A No.

WITNESS WALZEL: A No.

Q Do you have any interest in sharing the information, sharing information related to your work, on well access 25 today, anything that you want to share with us?

WITNESS WALZEL: A What do you mean by interest?

Q Is there anything that you want to tell us from your work, related to your work?

WITNESS WALZEL: A Just your questions.

WITNESS KOPECKY: A Yeah.

Q Okay, we'll move forward with the questions absolutely, okay. With that, Ms. Rose is going to ask you a little bit about your background related to why you are qualified to do what you did on well access 25. So with that, go ahead, Ms. Rose.

MS. ROSE: Thank you.

EXAMINATION

BY MS. ROSE:

Q So how would you describe what you do in general at your job?

WITNESS KOPECKY: A You want to go

first, Danny?

Q Or individually if it's quite different.

WITNESS WALZEL: A Yes, you know, customers call us when they're having well control issues and, you know, anything from underground blow-outs to surface blow-outs to circulating out of keg, you know, pressure control, call us out to resolve the issue.

WITNESS KOPECKY: A As well control specialist, I work under a broad direction of the senior well control specialist typically on any well control event, the types that Danny mentioned.

Q Okay. So more kind of individual issues versus just well interventions?

WITNESS KOPECKY: A We also do well interventions.

Q Okay, thank you. How did you -- how did you become a well control engineer, well control specialist? What kind of training did you get?

WITNESS KOPECKY: A I have a -- prior to joining Boots & Coots in 2004, I had a 20-year surface wellhead equipment background.

Q Okay.

A And I work for Boots & Coots in

different capacities throughout the world on different well control events. I joined the well control group, I believe, five years ago or six as a well control specialist.

WITNESS WALZEL: A I started at Boots & Coots in 2002. I was hired after graduating Texas A&M University with a petroleum engineering degree and, you know, and since then, I've worked in just about every aspect of what Boots & Coots does. I've been doing it for 16 years.

Q Okay. So you've worked there before it was bought by Halliburton?

WITNESS KOPECKY: A Yes.

WITNESS WALZEL: A Yes.

Q Can you describe, if at all, how the company has changed since Halliburton acquired it?

WITNESS KOPECKY: A Pertaining to?

Q Your experience as an employee, management, direction, just -- if nothing comes to mind, then that's fine too.

A Well, there certainly have been changes I can't really grasp, but I think it's just, you know, it's being part of a larger company.

WITNESS WALZEL: A Yeah, I would say it's, you know, our day-to-day work we do in

the field hasn't changed.

Q Okay.

WITNESS KOPECKY: A I agree.

Q Okay, thank you. So you obviously specialize in well control. Do you work on a lot of gas well leaks in particular?

WITNESS WALZEL: A Yes.

Q About how many would you say you've worked on in the past year?

WITNESS KOPECKY: A In the past year?

Q Yes, about, yeah --

A Well --

Q Yeah --

(Crosstalk.)

WITNESS KOPECKY: A Probably four.

Q Okay.

WITNESS WALZEL: A I've worked on one gas blowout this year.

Q Okay. And where were they?

WITNESS KOPECKY: A Columbia.

WITNESS WALZEL: A Columbia.

Q Okay.

WITNESS KOPECKY: A Columbia, Trinidad-Tobago, and can't recall. South Texas.

Q Okay.

A And I don't recall if France was in this year or just the end --

Q Okay, but --
A -- the end of last year --
Q Okay, but recently though?
WITNESS WALZEL: A Oh, you mean like this calendar year?
Q Yeah or -- no, just the past year give or take, you know.
A Trying to think of which ones I did at the end of last year. Yeah, I can't recall any gas leaks towards the end of last year.
Q And how many of them, if any, were like Aliso, like SS-25, maybe not in terms of the longevity of the leak but, you know, the way the well was.
WITNESS WALZEL: A Columbia was just like it.
Q Just like it?
A Yes.
Q Okay. How so?
(Crosstalk.)
THE REPORTER: Excuse me, gentlemen, we need to do this one at a time, please. Thank you.
WITNESS KOPECKY: A As Danny was saying and I interrupted him, it was a broach to the surface.
MS. ROSE: Q Okay. Did it have a

similar kind of underlying geology as well?

WITNESS KOPECKY: A No.

WITNESS WALZEL: A No.

Q No, okay. Have you worked on many that had a similar underlying geology?

WITNESS KOPECKY: A Let me -- I'm going to clarify. When I said no about the geology, it was not a storage well.

Q Okay.

A Okay.

Q So they are actually just extracting the gas for the first time?

WITNESS KOPECKY: A I think the well was temporarily abandoned in Columbia, wasn't it?

Q Okay.

WITNESS WALZEL: A They weren't producing it at the time.

Q Okay. So going back to your background a little bit, would you say that you have some expertise at killing leaky wells?

WITNESS WALZEL: A Yes.

WITNESS KOPECKY: A Yes.

Q And what in particular makes -- kind of gives you that expertise versus, say, someone that manages a field?

WITNESS WALZEL: A I would say what --

just the -- a lot of what we do is, you know, you gain the experience just from doing it.

Q Okay.

A We've learned from, you know, guys that worked at Reddit Air for 30, 40 years, you know, 50 years plus experience.

Q Yeah.

A You know, with our -- obviously the petroleum background, engineering background, and then learning it in the field.

Q Okay.

WITNESS KOPECKY: A And, yeah, I'd add that's what differentiates us is quality of our engineers.

Q The quality in terms of kind of experience?

A Experience, yes.

Q Okay. Do you get specialized training? Is it more that you just kind of going along to jobs and eventually pick up more understanding or anything?

A Well, and again, I'm not an engineer but we do attend types of training, a lot of it required. But you gain the most experience not in the classroom but in the field.

Q Okay.

WITNESS WALZEL: A Yeah.

Q Like working with people that are more senior or just confronting your problems?

A All the aboves, working with people that have done it and going out and actually doing it.

Q Thanks. And why would you say that you and your colleagues that went to Aliso Canyon for SS-25 were qualified to handle that particular gas leak?

A Just the experience of having done it before.

WITNESS KOPECKY: A I agree.

Q Have you ever testified in court as, like, an expert witness or anything like that?

WITNESS KOPECKY: A No.

WITNESS WALZEL: A No.

Q So for each of you, can you describe the last well that you worked on, kind of like what kind of well, where was it, how did you make a decision about how to deal with it, you know, what happened when you got there, that kind of thing.

WITNESS WALZEL: A Well, the last one I was involved with was in Columbia. It had broke the surface. There was gas and oil, water coming up 200 foot from the well. And

we -- it ended up -- it ended up bridging and we got a snubbing unit and went in and set cement plugs and --

Q I'm sorry, could you --

A So bridging with -- essentially the well plugged itself off on its own.

Q Okay.

A It was making a lot of sand.

Q Okay.

A And plugged up with sand.

Q Okay. And how soon was that after you got there?

A I don't know the exact date how many days --

Q Yeah.

A -- but within a week, week and a half it bridged when we started flowing it to relieve the pressure.

Q Okay. And when you showed up, what -- like, what did you do? Like, did you ask for information, did you go survey the well? Like, what's your thought process when you got to that well?

A Well, they had provided drilling records, you know, kind of a -- yeah, what they were, you know, what they were planning on doing, which was, I believe, put P and A in the well, plug and abandon. We did a site

survey and we ordered out equipment to pumps and, you know, kill fluids, installed additional --

(Crosstalk.)

THE REPORTER: Excuse me, folks, I can't take you both down at the same time. Thank you.

WITNESS WALZEL: A Installed additional valves on the wellhead, ordered a snubbing unit from the US. And then as we were just getting ready to rig up the snubbing unit is when the well bridged. So we used the snubbing unit to go in and clean it out and set cement plugs.

MS. ROSE: Q Okay. And did you -- is there kind of a -- when you get to the well, and you say, okay, this is a well, it's leaking, you know, it's a certain kind of well, is there any kind of like formula that you use or is it more just intuition? Like, how do you decide what you're going to do?

WITNESS WALZEL: A Well, I mean, you know, there's the formulas to figure out kill fluids and volumes. And then a lot of it is -- and we also ordered out wireline equipment, you know. A lot of it is running logs to, diagnostic logs, to find flow paths, holes.

Q When you say diagnostic logs, are those like past records or future --

A No, yeah, we get out there and run them.

Q Okay.

A Typically it would be moist temperature logs, gyros, spinner logs, you know, those would be the main --

Q Okay.

A -- the main three that we run.

Q Okay. And then based on the results of those, you decide --

A Right.

Q -- how you're going to approach the well. Okay. Do you find it useful to talk to the people that actually work on the field who haven't dealt with the well in the past or not so much?

A Yes.

Q Yes, okay. And what kind of information would you ask them?

A You know, just drilling, you know, well history --

WITNESS KOPECKY: A Formation pressure.

WITNESS WALZEL: A Formation pressure.

WITNESS KOPECKY: A Tubular data.

WITNESS WALZEL: A Tubular data,

wellhead equipment, pressure ratings, stuff like that.

Q Okay. And that's all -- that all sounds like information you could also get from a written record or not so often?

WITNESS KOPECKY: A Well, we -- although we may ask, we always ensure it's going to be confirmed by written record --

Q Okay.

A -- if at all possible.

Q Okay. Okay. Okay. Thank you. Could you describe the last well you worked on.

A Well, I was on the well with Danny --

Q Okay.

A -- in Columbia.

Q Okay.

A Participated in that. I don't think I'm really -- I was in Trinidad-Tobago on a well kill, but I don't think -- it was a different situation and I don't think I'm at liberty to --

Q Okay.

A -- because of confidentiality with that client.

Q Okay. Is there a recent kill, well kill, that you can talk about?

A The one prior to that would have been Columbia.

Q Okay. Okay. Thank you. So the one in Columbia, would you say that that was kind of a standard or typical well kill?

A Well, it bridged itself.

Q It bridged itself. Is that normal?

WITNESS WALZEL: A Sometimes it happens; sometimes it doesn't. Every well -- no two are the same when we show up.

Q Okay.

WITNESS KOPECKY: A As Danny said, it's typically not typical.

Q Okay.

A What I mean by that is no two are exactly the same. They're all unique scenarios.

Q Are there any kind of criteria that you would use that even just thinking about it for yourselves to kind of group them like, oh, this is a certain type or anything like that?

WITNESS WALZEL: A Other than surface blowout, underground blowout, broach, you know.

Q Okay.

A That's how you can classify them --

Q Yeah.

A -- but then each one has its own set of problems, you know, that you go through the diagnostics and, you know, there's no, you know, just every kill is different.

Q Okay. Fair enough. When you show up, are there any -- is there anything that you do typically to either figure out what you're going to do or first steps?

WITNESS KOPECKY: A First steps typically when we show up in a well control event is to ensure we secure the area, ensure safety of personnel and accountability.

Q Okay.

A And then clear any hazardous material from the area that could be the hot zone, if you will, that could be impacted such as fuel tanks or oxygen acetylene type bottles, anything that could escalate the situation.

Q Okay. And then what would you do after that?

A Try to get an evaluation of the situation.

Q Okay. And that would be through?

A Visual.

Q Visual, visual evaluation. And does that actually really inform what you

choose to do next? I don't know, I mean I've never been to a well.

A I mean it allows you to set your zones, your exclusion zones.

Q What's an exclusion zone?

A Well, there are areas that you don't allow any personnel in.

Q Okay.

A And then there's warm zones that you can have personnel in viewing, preparing to go into the hot zone or coming out, exiting the hot zone. And then you've got your areas that you can assemble equipment, things of that nature.

Q Okay. So this is all kind of securing the area safety. And then once that kind of work is complete, how do you start evaluating the well itself?

WITNESS WALZEL: A Well, like James said, visual, can you see where the flow is coming from, are we going to have access to the wellhead, conditions of the wellhead. As I said earlier, you can get access to the wellhead, you know, are we going to be able to put pump lines on it, rig up coil tubing units, wireline units.

Q Coil what?

A Coil tubing, you know, equipment to

go in and do the well intervention.

WITNESS KOPECKY: A Remediate.

WITNESS WALZEL: A Remediate.

Q Okay. And then is this the time at which you also runs those logs and maybe look at a well history or is that later?

A Well, I mean if there's information, then we'll review that. Sometimes it takes a little while to run the logs, you know, days or by the time you get equipment, source the equipment, so, yeah, look at the logs, order out equipment.

Q Okay.

WITNESS KOPECKY: A I agree.

Q Okay. And do you typically ask to speak to any one kind of person or to see any kind of record when you show up?

A Well, we would typically identify the incident commander.

Q Okay. And what do you talk to them about?

A Well, again, we don't own the well.

Q Yeah.

A But we're there to make recommendations.

Q Uh-huh.

A So we would talk to him about what they have in mind, you know, again, about

accountability of personnel, those type of issues initially.

Q Okay. Is there anyone else that you make it a priority to speak to?

WITNESS WALZEL: A Well, I mean just each company, you know, if there's engineers, geologists, just anybody that will have information.

Q Okay, okay. And --

WITNESS KOPECKY: A And, again, just for clarification, when I say we, we seek out this individual, we talk to this individual. A lot of times we're included in those meetings. Sometimes we're not. It's done by the senior --

Q Okay.

A -- personnel of Boots & Coots on location.

Q Okay. And as far as records or information that you look for when you show up, is there anything that you typically look for?

WITNESS WALZEL: A I think we've already --

Q Yeah.

A Well history --

Q Well history, okay.

A Tubulars.

Q Okay, okay. I just want to make sure.

A Yes.

Q Okay, thank you. I think I'm good.

MR. GRUEN: Thank you, Ms. Rose.

EXAMINATION (resumed)

BY MR. GRUEN:

Q Appreciate that. Thanks for that. A couple things just to follow up on. I take your point that each incident is different. What I heard earlier, too, is that there's some similarities between Columbia, what happened in Columbia, and then what happened in SS-25.

I think you had mentioned that one was -- that those were a surface breach. So to that point, they were similar.

WITNESS WALZEL: A Similar, yeah.

Q Even though I'm sure there were lots of differences, too, to your point. So just walking through that, is -- and then the bridging in Columbia would have been different --

A Right.

Q -- than SS-25. What else between Columbia and SS-25, if anything, was similar?

A That there was a broach to surface. That was pretty much all that was similar.

WITNESS KOPECKY: A I think that's the only similarity.

Q Okay, thank you. All right, so just to talk a little bit about -- I'm going to ask you to maybe, if you can as best you can, and I know it's three years ago approximately so it's been a little time and I'll work with you to help try and jog your memory if you can't remember.

I think most people might -- their memories might start to fade about what happened three years ago so I get that. But having said that, to the best you can, what I'd like to ask you to do is give us an understanding of in your experience from when you first started, when you first learned about SS-25 and the incident there, to give us as best you can a timeline in your experience of what happened including how you learned, and then the different well kill attempts that you had.

I recognize that's really broad. It may take a little bit of time to do that. So just maybe if we could start kind of at the beginning sort of and I'll ask questions about how you learned and if we could walk forward in time from there to when you finished up, so I'll -- this is just kind of

a high point. I'll start to ask questions about that.

But I just wanted to kind of give you an idea up front to where I'm going on this. So maybe with that, if you could, as best you can remember, approximately when -- and I'm not going to hold you to the exact date -- but approximately when did you first learn about the incident, did each of you learn about the incident at SS-25?

A Well, I'll begin. I won't be -- unfortunately I won't be able to get very far with the timeline.

Q Okay.

A But I initially -- I took the phone call for the SS-25 at approximately by memory 8:00, 8:30 Houston time. And I conferred with the gentleman that had phoned me with SoCal. We determined that we were going to need to mobilize. I contacted my employer or, excuse me, my direct supervisor, the well control manager, and we determined that we would send the senior well control specialist, a well control engineer, and myself initially.

Q Okay.

A And we departed on the first available commercial flight the next morning

early because we did look into a charter, but we wouldn't have been able to address anything in the dark hours and we arrived as early as possible so the charter wasn't beneficial.

Q And just a couple clarifications about that. When you said 8:00 to 8:30, was that in the morning or the evening?

A Oh, evening, I'm sorry, p.m., yes.

Q That's okay. Do you remember who the gentleman was at SoCalGas who called you?

A I don't recall exactly but I do recall it was a gentleman by the name of Todd Van Putte maybe.

Q Van de Putte?

A Maybe, something.

Q Okay, that's helpful. And do you remember how soon after the incident that phone call happened?

A No, I do not remember.

Q That question suggests I'm asking you to be precise for three years ago and I'm not, so let me just clarify. Would it have been within hours or days after the incident first happened?

A My recollection it would be hours maximum.

Q Hours maximum. That's helpful.

Okay, thank you. And so then you would have taken a charter then or you did take a charter the day -- the morning after the incident happened?

A We flew commercial in the morning.

Q Flew commercial the morning after the incident happened?

A Correct.

Q Okay, I follow. Thank you. And when you talked about the different -- I think you mentioned a well control manager and a well control specialist. You decided that certain personnel should come out. Which individuals were those?

A A senior well control specialist, myself, and Danny.

Q And what was the name of the senior well control specialist?

A Danny Clayton.

Q Danny Clayton, thank you. Okay. And so when you first were on the phone -- actually let me -- so you get out to Aliso Canyon field after the charter. Am I following that right? You went right to the field?

A Yes, we did.]

Q What was the first thing you did when you got to the field?

WITNESS KOPECKY: A Again, I recall -- and, again, I'm going by memory. I recall we attended a briefing.

Do you agree, Danny?

We attended a briefing prior to going to the wellsite on Aliso Canyon, the briefing on the current situation and safety concerns.

Q Okay. And the way I'm asking is -- I appreciate that if you want to jump in at any time. I'm asking -- I'm looking at Mr. Kopecky, but it's really directed to both of you, so feel free to jump in.

WITNESS WALZEL: A Okay.

Q So when you talk about the safety concerns, do you remember what specifically they were -- what was discussed at that meeting?

WITNESS KOPECKY: Of course, we weren't really aware because we hadn't seen the well, but the safety concerns to our knowledge, or that were communicated to us was methane gas leak.

Q Okay. Anything else?

A And not for health reasons, but for as an ignition, possible source.

Q I see. Okay. So that the surface breach, was it identified as a surface breach

at that point?

WITNESS WALZEL: A Yes. I mean --

WITNESS KOPECKY: A Yeah. That was the reason for the phone call, the initial call.

Q Got it. Got it. So the initial phone call would have identified the surface breach, and due to the surface breach then there was concern about ignition, there was enough gas being released into the atmosphere, there were concerns about ignition?

WITNESS WALZEL: A Anytime there's gas, you know, whether it's a little or any -- it's always a --

Q I follow. Thank you.

WITNESS KOPECKY: A Right.

Q Let me back up to what else on the phone call -- what were the things identified on the initial phone call to you that made you say, Hey, we better get out there.

WITNESS KOPECKY: A The fact that there was a broach to surface.

Q Okay.

A Ever slight as it may have been at the time, there was still a major concern.

Q Okay. After the safety meeting, what -- so they had identified the surface

breach to you. Did they -- did either in the phone call or the safety meeting, can you describe more the problem that they had described to you.

WITNESS WALZEL: A I mean, it was, you know, there's a gas, you know, release and then we went and looked at it, you know, and did an observation of the well, and, you know -- you know, I mean, they just described, you know, what they last saw up there, and we went and looked at it and confirmed it.

Q So you observed what they had told you?

WITNESS WALZEL: A Right.

Q Did you observe anything different than what they told you?

A No.

WITNESS KOPECKY: No.

Q What did you observe up there?

WITNESS WALZEL: A Well, we went and looked at it and, you know, there was - there was an asphalt pad on location, you know, around the well, and I recall there was a couple cracks in the asphalt, and you could see gas fumes coming up out of it.

Q Okay. And were you both there when you went up to see the condition?

WITNESS KOPECKY: A Yes. And as Danny mentioned, you could see the gas. You had to -- you had to really look. There were small fissures, cracks, and then it wasn't any major discharge visually at that time.

Q Okay. I think you had talked about doing an evaluation after doing a visual. That's kind of one of the common things you mentioned to Ms. Rose is what you do -- what you've done commonly.

So at what point did you do your evaluation on SS-25?

WITNESS WALZEL: A First day. As soon as we got there.

Q What did you do as part of your -- what did you do as your evaluation on SS-25?

WITNESS WALZEL: A Went and looked at the well and looked at the site.

Q What did you decide in terms of -- what did you find? And what did you think had to be done as a result of your observation?

WITNESS KOPECKY: A That the well would have to be killed.

Q So let's go through the well-kill attempts. And I understand there are a few, and if we can -- you know, I think there were -- my understanding was there were a

number of them. So I'd like to just walk-through, as best you can remember, the different well-kill attempts.

So after you first got there, can you talk about the first well-kill attempt.

WITNESS WALZEL: A Yes. I mean, yeah, we, you know, we ordered out equipment - pumps, pump iron, choke manifolds, you know - got all the unnecessary equipment off location, and we pumped down -- we lined up to pump down the tubing, and I can't -- I can't recall the specifics of how -- how much we pumped. You know, we set the -- I believe all the wellhead equipment was 5,000 PSI pressure rating. So we set a safety limit somewhere around 4,300 pump PSI, and we pumped on it, and -- but I couldn't tell you how many barrels, but we deemed that it was, you know -- we shut down to regroup and talk about it because it wasn't, you know, going as expected.

Q How did you decide how many barrels to pump and what PSI you were going -- what pressure you were going to use in order to pump them and all that stuff?

WITNESS WALZEL: A Right. So, obviously, the faster you pump, the more pressure you're going to have.

Q Uh-huh.

WITNESS WALZEL: A So we tried to pump as fast, you know -- see what we could pump before we exceeded the safety limit and pressure and then -- but like I said, I can't recall how many barrels we pumped or when we shut down or I don't remember -- I don't remember the specifics of how many barrels we pumped.

MR. BRUNO: May I jump in real quick?

MR. GRUEN: Sure. Okay.

EXAMINATION

BY MR. BRUNO:

Q Mr. Walzel, and Mr. Kopecky, I want to back up just a bit, and I want to get a few clarifications before we get to the first well-kill attempt.

When you could see fissures, could you also smell gas; do you recall? Could you smell the odorant?

WITNESS WALZEL: A I can't remember if I could smell it, or, you know, I remember it was windy; so, you know, I can't recall if I could smell it or not that day.

WITNESS KOPECKY: A I'm in agreement with Danny. As a matter of fact, now that he mentions it, which you're all probably aware,

it's typically windy at all times up on the mountains there, apparently.

I don't recall any memory of smelling any -- I forget what the additive is called.

Q Yes, sir. I understand.

What about the concentration of gas; when we're first seeing the gas coming through the fissures, was that a concentration of gas that was explosive, or do you recall?

WITNESS KOPECKY: A I don't recall. We work a lot in 90, 100 percent LEL. It didn't seem to be a large concentration of gas. It -- we weren't concerned with the ignition in the immediate area, especially with the wind.

Q And by 90 percent LEL, you mean you weren't quite at the lower explosive limit?

WITNESS WALZEL: No.

WITNESS KOPECKY: No. No. I say we work in those environments all the time, and with my experience, this wasn't an explosive environment when we initially went up to observe.

Q Yes, sir. Thank you. Thank you for that. Would you consider -- if I use the term "blow-out," does that mean anything to

you?

WITNESS KOPECKY: A Certainly.

WITNESS WALZEL: A Yeah. I mean, the definition of a "blow-out" is an uncontrolled flow or release --

WITNESS KOPECKY: A To the atmosphere.

WITNESS WALZEL: A -- or underground.

Q So at the time of the phone call, am I understanding, it was already a blow-out at that point?

WITNESS KOPECKY: A Whenever it broached the surface.

WITNESS WALZEL: A Correct.

Q Thank you for that. I just have one more.

You mentioned the incident commander is one of the first things you do around the safety meeting. Had you met the incident commander at that point?

WITNESS KOPECKY: A I don't recall. I'm familiar with the incident commander. We met a lot of people upon arrival. I don't recall who the incident commander was at that time. At that time. At that particular time.

Q But do you recall meeting an incident commander?

WITNESS KOPECKY: A Yes -- no, I don't

know that I met him on the first day because I don't recall there was so many titles, meeting a lot of people. We were concerned with getting a chance to look at the well, but, no. I did meet an incident commander throughout the job thereafter.

Q Yes, sir. And then, if I understand, I'm just going back to decision-making. Did I understand you correctly that the incident commander makes decisions, but you guys are providing the recommendations? Did I pick that up correctly?

WITNESS KOPECKY: A I think broadly, yes. Again, what I stated earlier is that we don't -- typically, and I'm referring to other jobs as well, when we go on location, we don't take control, if you will.

We're governed, if you will, by whomever the customer representative is. We're there to make recommendations, and they know that that is our expertise.

Q Yes, sir. Okay. I'm going to throw out a name and just to the best of your recollection, just kind of trying to identify the incident commander. Does the name Jimmy Cho jog any memory?

WITNESS KOPECKY: A I recall meeting

Jimmy.

WITNESS WALZEL: A Yes.

Q Do you think he may have been the incident commander?

WITNESS WALZEL: A Well, initially -- I don't recall, but the incident commander throughout the majority, you know, throughout -- what I believe was Bret.

WITNESS KOPECKY: A Correct.

Q By Bret, do you mean Bret Lane?

WITNESS KOPECKY: Yes.

WITNESS WALZEL: Yes. I couldn't remember his last name.

Q So he was in the capacity of -- by "he," I mean Mr. Lane. He was in the capacity of either being incident commander or making decisions?

WITNESS WALZEL: Yes.

WITNESS KOPECKY: I'm assuming -- not assuming. I know his entire team.

MR. BRUNO: Q Yes, sir. Understand.

EXAMINATION (resumed)

BY MR. GRUEN:

Q As incident commander with his team, Bret Lane was making the final decisions about how to proceed on the well-kill attempts.

WITNESS KOPECKY: A I don't know that to be fact.

Q Okay. Would you make recommendations to Bret Lane and his team about how to proceed well-kill attempts?

WITNESS WALZEL: A Yes.

Q Were the recommendations followed?

WITNESS WALZEL: A Yes. Well, yeah.

Q Any changes that they made to the recommendations?

WITNESS WALZEL: A I mean, I can't remember if there was, you know, any changes off the top of my head right now.

Q Do you remember any personnel from SoCalGas who talked the recommendations through with you before you made them with Mr. Lane's team?

WITNESS KOPECKY: A I was not involved in the meetings with any of the recommendations.

WITNESS WALZEL: Yes. I mean, I was -- typically, I would be, like, present at the morning meeting, and, you know, like I said, our team was in the meetings. You know, I mean, it was kind of, you know, meet in the trailer, talk about what we would like to do, and come up with a formula and go out and do our pump job.

Q Who was your team leader?

WITNESS WALZEL: A His name was Danny Clayton.

Q Danny Clayton, yeah.

And so how would you come up with a recommendation to SoCalGas?

And when I ask, I mean, did you come up with a recommendation among the Boots & Coots team first, and then present it to SoCal?

WITNESS KOPECKY: A I don't believe -- I wasn't involved in strategy.

Q Okay.

WITNESS WALZEL: A Yeah, I mean, you know, let's try to pump on it and rig up a pump on it, and, you know, with the kill-weight fluids, and, you know, make an attempt at trying to kill it.

Q And that was a conversation you had with Danny Clayton to figure that out?

WITNESS WALZEL: A Yeah. I mean, really, when we got there, that was the first, you know -- you know, we got to pump on it to kill it.

Q Right. Right. Yeah. So I'm following you on the strategy of how to do it. I'm just trying to get at who was kind of in the -- who you talked to first in order

to figure out how.

A I can't -- I don't remember who I talked to first.

Q Okay. Okay. Someone within Boots & Coots first or was it kind of an overall meeting with SoCalGas and Boots & Coots to figure out how to do it?

A Well, you know, it was always kind of overall, you know, group, you know, discussion.

Q Okay.

A Weigh out pros and cons and consequences to come up with the best plan.

EXAMINATION

BY MR. BRUNO:

Q Mr. Wetzel --

WITNESS WALZEL: Walzel.

Q -- Walzel. I'm sorry. I'm sorry, sir.

Or, Mr. Kopecky, just to clarify, I think you mentioned you had to pump on it to kill it?

WITNESS WALZEL: A Right.

Q What are you trying to achieve there? You are pumping some medium down?

A Yeah.

Q Can you kind of describe that

process. Like, what are you trying to...

A Well, yeah, to, you know, to kill a well you need to have hydrostatic equal to or higher than the reservoir pressure. So from that, you can come up with how many pounds-per-gallon fluid you need, and then, you know, on a well that's flowing, you know, you kill it with mud weight and pump rate.

So, you know, part of the initial pump was, you know, if it works, it works. If it doesn't, it might give us some information to, you know, use in the future attempts.

Q You mentioned reservoir pressure. Is that a number that you guys calculate or is that a number that was given to you by SoCalGas?

A It was a number given to us.

Q So is that an important input for the first well-kill attempt?

I mean, did you -- I'm understanding it to be almost like, you know, do your best to design it, to overcome it. I don't want to put words in your mouth --

WITNESS WALZEL: A Right.

Q And then see what happens?

WITNESS WALZEL: A Well, not "to see what happens," but, you know, we know our --

you know, come up with our kill weight. You know, we didn't know -- or you know, the variables would be if, you know, we could pump and overcome -- you know, get enough hydrostatic in the well bore to maintain the reservoir pressure.

Q And when that number was given to you, was it verbal or was it written or a record?

WITNESS WALZEL: A Well, I know it was verbal and there might -- some record, you know, written down somewhere.

Q Just based on your experience, is that reservoir pressure reasonable? I mean, did it sound reasonable?

A I mean, you know, as far as reasonable, I mean, it's -- I don't remember what --

WITNESS KOPECKY: A I don't recall what it was.

WITNESS WALZEL: A I don't remember what the equivalent mud weight was, but it wasn't abnormally high.

Q So if I understand you correctly, whatever the reservoir pressure was, you then designed the mud weight --

WITNESS WALZEL: A Right.

Q And that mud weight didn't stand

out as abnormal?

WITNESS WALZEL: A No.

Q It was kind of in the ballpark, if you will?

WITNESS WALZEL: A Yeah, we worked on mud weights up to -- a lot higher, you know, and normal mud weight.

MR. BRUNO: Okay. I do have one more question. I apologize for jumping in, Darryl.

MR. GRUEN: That's okay.

MR. BRUNO: Q The first meeting, you know, the check-in with the incident commander, prior to the first well-kill attempt, was there any sort of feeling this was going to be a standard well-kill attempt or this one's different or this is going to be a several month...

WITNESS WALZEL: A We didn't have any expectations.

Q Yes, sir.

Is it always like that, there are just no real expectations, it just kind of depends?

A I mean, we don't -- yes. I mean, we don't show up, Oh, this is going to be a two-day job or a three-day job or two-month job.

WITNESS KOPECKY: A And when we attempted to first kill, you're always in hopes that it's going to kill, that you're going to be successful in killing the well.

WITNESS WALZEL: A Yes.]

EXAMINATION (resumed)

BY MR. GRUEN:

Q Just a couple of follow-ups on the reservoir pressure and how that input got to you. Did they -- so SoCalGas gave you the reservoir pressure as an input for you to calculate your mud weight?

WITNESS WALZEL: A Yes.

Q Did I follow that right? Okay. Did they explain to you how they came up with the reservoir pressure?

A They had pressure gauges.

Q What -- in giving you a number -- what was their basis for giving you the number?

A To figure out the -- know what your equivalent mud weight is.

Q Sure. I'm asking the question the wrong way.

What were they -- did they do anything to show you how they came up with the number?

A I mean, what do you mean by "how

they came up with the number"?

Q You talked about logs?

A Right.

Q Did they show you the logs?

A I mean, it wouldn't be -- it wouldn't be -- I mean, when I talk about logs, I'm talking about noise temperature levels. I mean, they have pressure gauges, and they are maintained -- it's their gas storage, so they know what the pressure is. You know?

Q Okay. So I think I'm hearing -- and check me on this -- that typically someone would come up with a reservoir pressure based on things like noise temperature logs?

A No.

Q Okay.

A Yeah. When I talk about logs -- no, I mean, it's -- they are gas-filled. They are putting gas in it, taking gas out. They have censors or, you know, pressure gauges.

Q So they would -- they -- did they show you that information -- any of that information? I think we're going around the same thing, but I'm just trying to understand your answer, if they actually showed you the

results from the noise temp logs?

A It wouldn't have been -- noise temp wouldn't have showed us the pressure. I mean, there's a pressure gauge and a number on it and --

Q Okay. Okay. So -- yeah, I think we'll get back to it.

MR. SHER: Darryl, may I?

MR. GRUEN: Yeah.

MR. SHER: Q Just with regards to pressure gauges, do you know -- are those pressure gauges in the well itself, or are those pressure gauges throughout the fields?

A I don't know where their gauges were set up.

MR. GRUEN: Okay. Okay.

EXAMINATION

BY MR. BRUNO:

Q And Mr. Walzel or Kopecky -- Mr. Kopecky, you guys didn't see the gauge, but there was a gauge that registered the reservoir pressure; is that what you're saying?

WITNESS WALZEL: A I mean, we saw gauges on wells, and -- you know, I don't recall what that number was right now or -- but anyways.

Q Right.

A So we -- you know, there was gauges on wells out there.

Q But it's a direct measurement. It's not a calculated -- in other words, when we talk about reservoir pressure, you're saying that that can be read on a gauge?

A Right.

Q Okay. Is that --

WITNESS KOPECKY: A In pound per square inch. That's what we're referring to.

Q And it's atmosphere -- it's at surface?

A Correct.

WITNESS WALZEL: A Right.

Q Does that measure the full pressure of the reservoir all the way down to the bottom hole?

A Well, you would have to account for hydrostatic -- or the gas gradient from surface to the reservoir, but yes, I mean, calculate it -- you can calculate it.

Q When you're designing your mud or your kill fluid, if you will --

A Right.

Q -- is it that reservoir pressure or is it also a calculation? Could you maybe talk about that a little bit, like how it -- you mentioned gradient. I'm not an expert,

sir, so --

A Right. So your reservoir has a pressure. Then there's a -- in this instance, it was a gas column, and then there's a pressure gauge at the surface. So you would -- you know, you read your --

WITNESS KOPECKY: A Pressure.

WITNESS WALZEL: A -- pressure on the gauge and then add the hydro -- the gas gradient column and then add those two together, and it would give you your reservoir pressure.

Q And it's that reservoir pressure, when you add them together, that you are designing your mud to?

A Well, yes, I mean, you get -- if your reservoir's a thousand PSI and then -- there's a formula: .052 times the mud weight times the depth gives you a pressure. So you can calculate what that mud weight would need to be.

Q And that calculation of adding the column pressure to the gauge pressure, if you will, was that done by Boots & Coots, or that was done by SoCalGas?

A I'm sure. Yeah, I mean, we would have -- I mean, we would have calculated it, you know, ourselves to come up with --

WITNESS KOPECKY: A There would have been more than one person running the calculation.

Q It's an important number. So a lot of checks?

A And it's a pretty simple calculation.

Q Does that formula have a name that you described?

WITNESS WALZEL: A Gas gradient.

Q Gas gradient?

A What I would call it.

Q Is that synonymous with flow rate?

A No. I mean, pressure and flow rate are -- you can have high pressure, low flow rate, low pressure, high flow rate. I mean, I don't know what you mean by "synonymous."

Q Does the flow rate factor into the equation for determination of mud weight?

A On a dynamic kill, yes, it would.

Q The design for the first well-kill attempt, was that a dynamic kill?

A It would have -- we were pumping on a well that was flowing, so it would have been -- there was unknowns of flow paths, how much it was flowing, reservoir, you know -- there was some unknowns. So you design it for the max we could pump, and that's the max

you could pump.

MR. SHER: Q Just for clarification, you said the first well-kill attempt. Is it true that SoCalGas tried to do a well-kill attempt prior to Boots & Coots' first attempt.

A I mean, I wasn't there, so I don't know.

Q Did they provide you any information as to whether or not they attempted an attempt to kill the well prior to Boots & Coots doing so?

WITNESS KOPECKY: A I didn't see any documentation.

MR. GRUEN: Q What other things factored into the calcs for Boots & Coots' first well-kill attempt? So you talked about flow rate.

A Right.

Q You talked about the other factors that you used to make your calculation.

A Like I said, there was unknowns of where flow path might be, how -- the rate of flow. You know, if it's a small hole, it might be flowing really fast. There's several unknowns. All we knew was, hey, our wellhead equipment is only good for this. So that's our limiting factor.

WITNESS KOPECKY: A Limiting factor.

WITNESS WALZEL: A So we pumped as fast as we could, and that -- you know, the wellhead -- you don't want to exceed your wellhead equipment.

Q Got you. Can you describe what the different unknowns were that you just talked about?

A Yeah. Initially, you know, any possible flow paths, conditions of the two being -- conditions around -- you know, around the well -- you know, the formation around the well. But, you know, the flow rate and flow paths were, you know, probably the two biggest.

Q Okay.

EXAMINATION

BY MS. ROSE:

Q Two biggest unknowns?

A Right.

Q Okay. In your experience, is it possible to get that -- have you in past well-kill attempts been able to get flow paths and flow rates to get perfect information for those things?

A Well, from -- you know, from running, say, a noise temp log, you can get a picture of where the flow might be entering

and exiting a wellbore. Spinner survey is nothing more than a little spinner on a tool, and if it's not spinning, it's not flowing. If it's spinning somewhere, you can kind of pinpoint holes. There's USIT logs and different logs to run to get a picture of the flow paths.

And then you can -- if the well is being diverted, you can set up pressure gauges and get an estimate of gas flow. Or, you know, if it's several -- if it's oil, water, gas, you know, makes it a little more complicated to get an exact. But, you know, typically, you know, you design it, and then you can put in a -- you know, you'd have extra hydraulic horsepower and stuff to -- if you need to pump more. But in this case, the 5,000 PSI was kind of limited on how fast you could actually pump on the well.

Q So with regards to the noise temp logs and the spinner surveys and those things, were any of those used here in order to get access, get a better understanding of the flow paths and the flow rates?

A Yes.

Q Can you talk about that more?

A Yes. I don't recall if we did it after the first attempt or second attempt,

but we ran noise temperature. And from what I recall, there was a severe cooling at -- it was -- it was over a range, but it was cold enough that the tools weren't communicating with the logging truck. That was the first I've ever seen.

EXAMINATION

BY MR. SHER:

Q What does that mean if it's cold?

A I guess the tools have -- oh. If it's cold, that means the gas is expanding in the cooling. And I guess the tools -- I don't know if it was how the temperature rate -- I never seen it before, but over that range, it was -- or those depths, it was cold. So the tool was not communicating with the logging truck. So we ran it, and it was cold over -- I don't remember the depth, but -- exactly, but you know, maybe, say, 800 to 1,000 foot there was a cooling. So we ran the spinner survey, and it didn't show anything until, I remember, right at the bottom it was spinning.

So, you know, at the time it appeared that the gas was exiting the tubing fairly deep. Then we also -- yes. So we ran those two.

Q Sorry. By "fairly deep," in your

experience, is that 1,000 feet or 8,000 feet?

A Yeah. I'm sorry. When I say "fairly deep," it was just -- well, it was as -- I don't remember the number, but the spinner looked normal until it got as deep as we ran it in the well. When I say "fairly deep," it was towards the bottom of the well. So that's why I said "fairly."

Q So that gives you an idea that the gas is escaping the tubing or the casing at some point deeper than 1,000 feet in the well?

A No. Well, it gave a range. It was kind of a -- it was cold over -- you know, it was cold over certain -- again, the information wasn't being sent to the logging truck very good -- very well. So it was just a range of depth where it was cold. So there wasn't -- you couldn't say, Oh, it's right -- there's a hole right here. It was just somewhere over -- there's likely a hole.

Q Okay.

MR. SHER: Q Sorry. On that point -- so when you have gas expanding and creating cooling, it means that gas is going from a smaller, maybe, aperture to a larger -- is that --

A Are you talking about hole size?

Q Yes.
A I mean, it means it's going through a hole and expanding.
MS. ROSE: Q So the volume of the gas would be increasing?
A Yeah. I mean, it's expanding.
MS. ROSE: Yeah.
EXAMINATION (resumed)
BY MR. GRUEN:
Q So just regarding the flow paths and flow rates -- so the noise temp logs, you ran it. You ran a spinner survey, right?
A Mm-hmm.
Q You did your own noise temp log? You created your own?
A What do you mean by I created it?
Q I'm wondering if you used SoCalGas's -- if they provided you a noise temp log or --
A No. There was one run while we were out there.
Q And you used the information that you had from both the noise temp log and the spinner survey while you were out there?
A Right.
Q Did you get any information from SoCalGas about the condition of the well before you got out there?

A No.
Q No. Okay.
WITNESS KOPECKY: A No.
MR. GRUEN: Okay.
MR. SHER: Darryl -- sorry -- I just want to note it's 11:15. Does anyone need a break for the bathroom?
WITNESS KOPECKY: A Sure.
MR. GRUEN: Let's go off the record.
(Off the record.)
MR. GRUEN: Back on the record.
Q If we can just -- if we could keep moving forward. I'm trying to get a time line as best we can.
WITNESS WALZEL: A Mm-hmm.
Q So when you first came out -- and we were talking a little bit about a well-kill attempt that you did -- how soon after you came out approximately do you remember that you started the first well kill?
A Oh. I don't recall how many days that was.
Q Okay.
WITNESS KOPECKY: A I do not either.
Q Do you recall approximately how many well-kill attempts you did?
A I recall approximately three to

possibly five.

Q Over how long a period approximately?

A Approximately 28 days.

WITNESS WALZEL: A Right.

Q Okay. And again, approximately how often did you do each well-kill attempt?

WITNESS KOPECKY: A I don't recall.

WITNESS WALZEL: A I don't recall how many days were in between because between some of them we were doing -- we had -- we had to do other things.

Q Okay. Okay. So three to five well-kill attempts over about 28 days. Do you recall how -- so I think you described the weight of the mud and the pressure that you used on the first attempt that you tried?

A Right.

Q How did those factors change, if at all, from the first attempt to the second?

A I mean, the reservoir pressure was decreasing. You know, that's -- that would be the reservoir pressure, and maybe the flow coming from the well might have decreased. But again, that was over time. The pressure was the only thing that I recall recorded that could be verified had changed.

Q Decreasing?

A Decreasing.

Q Okay. Okay. Anything to add, Mr. Kopecky?

WITNESS KOPECKY: A No. Just as Danny says, the pressure was decreasing, and going by memory, to my knowledge, SoCal was reducing that pressure by moving from that reservoir -- moving the gas.

Q As the pressure decreased, how would you adjust the weight of the mud?

WITNESS WALZEL: A Well, I mean, I don't recall how -- if the mud weight was changed or if we changed the mud weight while we did it.

Q Okay.

WITNESS KOPECKY: A And just for clarification -- and we typically use the term "mud weight," but I don't recall -- I don't recall if it was actually mud or if it was a clear brine.

Q So there was a substance, and you were figuring out what weight to use?

WITNESS KOPECKY: A Right.

WITNESS WALZEL: A Right.

Q Did you consider other options? I assume this -- maybe I should clarify this. These were all top well attempts, right?

A Mm-hmm.

Q Were there -- I don't have the knowledge that you both have. Were there other options that you considered other than the top well-kill attempts in order to kill the SS-25?

A We discussed a relief well.

WITNESS KOPECKY: A And I was aware that they were -- SoCal was making the preparations and physically saw them. I don't remember on what day I physically saw preparations being made in constructing pads, and things of that nature -- two pads, as a matter of fact, but they were making preparations to drill the relief well simultaneously. Of course, it takes time to get everything together -- a rig. So it really wouldn't be same options, but they were proceeding with that -- that contingency.

Q Did you have any recommendations -- did you talk with them about the relief well?

A I didn't personally, but I know that Boots & Coots did.

WITNESS WALZEL: A Right.

Q Who at Boots & Coots talked to SoCalGas about the relief well?

A Well, the conversation I recall early -- and I don't remember if it was after

the first or the second, but early on in the thing, you know -- hey, we always want to be planning a relief well in case surface intervention doesn't work or isn't possible. And they were -- I was told our engineers are gathering data and coming up with a plan.

Then our -- we have -- a relief well group started working with them and planning relief well directories, you know, the kill from the relief well to the blowout well, but I wasn't involved with the relief well planning. But early on in the planning it was already -- the wheels were -- the process was in motion.

Q Okay. Just in terms -- let me go back to the three to five well-kill attempts that you made. I get it. This is a rough estimate. Again, we're talking about something about three years ago. So just in your experience, how often have you been successful on your first well-kill attempt approximately?

A Oh, I wouldn't have a number percentage-wise.

Q Can you give a rough estimate?

A I mean, I could say they are not always killed on the first time.

Q So maybe between 80 and 90 percent

are killed on the first time or 50 and 60 percent are killed the first time?

A I mean, I wouldn't have -- I wouldn't know a percentage.

Q I guess I'm wondering just based on your experience how often -- how often -- I get that they are not all killed the first time, but they are -- some of them are killed the first time, I would imagine, right?

A Yeah. Some are.

Q So are we closer to almost all of them being killed the first time, or is it closer to almost none of them being killed the first time?

A I mean, I don't have a percentage. Somewhere in between.

Q Okay. How about you?

WITNESS KOPECKY: A No, I'm thinking -- trying to, but I can't come up with any kind of percentage either.

Q Was Columbia killed the first time?

WITNESS WALZEL: A If I remember, it bridged on its own.

Q So that means -- by "bridging," it actually stopped the gas from leaking? In the case of Columbia, it stopped the incident naturally?

A Yeah.

Q Did you try to kill?

A It bridged. If I remember, it bridged as we were getting -- we were -- the snubbing unit rigged up.

Q Oh, I see. What about some of the other wells that you talked about in the past year, did those -- that you mentioned to Ms. Rose -- were those successful -- other than Columbia, were those successful kills in the first attempt?

WITNESS KOPECKY: A Honestly, I think those -- any other wells that we mentioned are somewhat -- other than the one similarity that we brought up about Columbia, I think other well attempts would be somewhat irrelevant. That is, as we had stated earlier, every situation is different. I mean, it may appear similar, but there's different information that goes into the strategy.

Q Right. So I hear what you're saying, and I -- I think I just like to get the facts out and understand. And I get that you haven't given me a specific answer to this also, and I'm asking you guys both directly. Okay? So let's just get this down and be sure. It could be because I may have some follow-ups. Okay. So just with those

well-kill attempts, even noting your point about it not being relevant, I'd still like you to answer the question. Okay?

So in terms of -- all right. So Columbia bridged on its own. I'm just looking for the other leaks. I think Mr. Kopecky, you had identified a couple of them. There was Columbia, Trinidad-Tobago -- did that one -- was that one killed on the first attempt successfully?

A Yes, it was.

Q South Texas, was that one killed on the first attempt successfully?

A No.

Q When was that one killed?

A Maybe on the third circulation.

What I mean -- for clarification, we're talking apples and oranges. That was a drilling well. It wasn't a production well or a storage well. That well was being drilled. There was totally different circumstances on the well in Trinidad-Tobago. It took 7 barrels of fluid to kill the well.

Q I appreciate the clarification. That's helpful. I think I'm understanding why you're saying it's not relevant.

A Yes, sir.

Q So that's helpful in context.

Okay. Let me just ask -- I think you had talked a little bit about some kind of information -- some kinds of records that you need or that you typically use, and I think one of the things that you mentioned was drilling -- drilling records and well history. So could you talk about, in the case of SS-25, what information you asked for from Southern California Gas Company in order to do your work?

A Yes, they provided drilling records when the well was drilled. There was a -- some old logs, and I believe it was -- you know, I can't recall what logs, but anyway, you know, just your basic, you know -- what the, you know, the drilling records were from the company that drilled the well case and sizes. There might have been some resistivity log in there. I don't recall exactly what it was. But you know, it would have been something just to determine fluids in the formation when they drilled the well years ago.

Q Anything else?

A Not that I can recall right now.

Q Anything?

WITNESS KOPECKY: A No, sir.

Q That's helpful. So in terms of the

drilling records, what do you typically expect to see in a drilling record given your experience?

A Well, the normal drilling record today would be we drill from this depth to this depth, mud weight of this -- basically just a diary of what happened at the well that day.

Q Okay. So on a historic basis, day-to-day, dating back to the beginning of the well?

A No. This would have been during the drilling process of the well.

Q Okay. When the well was initially drilled?

A Correct.

Q Got you. Okay. And what did you see in the drilling records in the case of SS-25? What did you see in those drilling records?

A Today we drilled this depth to this depth, ran this casing, submitted this casing, your normal drilling activity.

Q Did you say -- was there any information regarding the drilling activity that you just described that was missing?

A No.

Q How about -- what would you see on

the logs and the other records that you talked about? What would you expect to see in those cases?]

A From what I recall, the log, it would have been a resistivity, which it was, you know, a typical log that after a well drill, it would have said, okay, this zone is water-bearing or oil-bearing or, you know, just a normal logs run after a well is drilled.

Q Okay. So when you say water-bearing, can you just clarify what that means.

A Well, I mean it would tell you. It would give you an idea if a certain zone has water in it or oil in it or, you know, resistivity of the fluids in the well.

Q Okay. And why is that? Why do you need that information?

A Well, the whole idea for drilling the oil well was to find oil so, you know, a company would run them to say, hey, this might be oil right here.

WITNESS KOPECKY: A It would give you an indication of where you set your pipe.

Q Gotcha. So the higher the resistivity, the more likely that you might find oil?

A Right.

Q Okay, I follow. So what other things within the well history, what other records would you -- in order to do your work in the course of your work -- would you ask to see in order to kill a well?

A First of all, just for clarification again, I didn't examine any of the drilling records. I think I did -- the only records I saw on the well were of a wellhead schematic.

Q Okay. And what was the purpose in seeing -- in asking for and seeing the wellhead schematic?

A Well, typically when we do that, it kind of helps you determine for a fact tubular size by your nomenclature of your wellhead equipment. If you've got a 2 7/8, 3 1/2, whatever, 2 3/8 tubing, typically you can't see in the well, of course. And if someone says, hey, we got 2 7/8 tubing and typically the well will have 2 9/16 tree on it, so it's just different factors that you put together to draw you to a conclusion.

Q Okay.

WITNESS WALZEL: A And that information is needed, you know. If we're going to rig up a wireline unit or whatever,

you need to know flange sizes so if you need to order out a valve, you know what size valve to order out to, you know, to put on the tree or whatever.

WITNESS KOPECKY: A Basically so you know what you're working with.

Q Okay. And so what equipment, if any, did the wellhead schematic -- did you make any decisions about what equipment to use based on the wellhead schematic?

WITNESS WALZEL: A I mean it would have been additional valve, you know, size of the valve. But if we needed to rig up a wireline, we need to go from this size flange or, you know, basically that would have been it. That wouldn't have determined what equipment we need to order, just what do we need to order to rig up the equipment.

WITNESS KOPECKY: A We did add -- we did an additional swab valve or crown valve, if you will, just as an additional barrier.

Q What is a swab valve or a crown valve?

A It's located at the uppermost of the tree, just below your tree cap or your bottom hole test adapter.

Q Okay.

A It would be your top component on

the tree itself.

Q Thank you. Were any of the flanges or the valves, was there any that didn't fit properly or that weren't used, that you couldn't use effectively when you used the equipment to hook up?

WITNESS WALZEL: A No.

WITNESS KOPECKY: A No, not to my knowledge.

WITNESS WALZEL: A Because we rigged up a, you know, ran pipe, plumbed everything up from the wellhead up and tied in, you know. As I recall, the valves were working.

WITNESS KOPECKY: A Yes.

Q Okay. Thank you.

A The equipment, service equipment, was in relatively good condition.

Q Okay. And based on the wellhead schematic, all the equipment that you had hooked up properly, the wellhead schematic --

A It was accurate.

Q -- information was accurate?

WITNESS WALZEL: A Yeah.

WITNESS KOPECKY: A And then we confirmed it visually.

Q All right. What other information did you ask for regarding the history of the well, if any?

WITNESS WALZEL: A I mean that would have been -- I believe that covered all the information.

Q Okay.

MR. BRUNO: Yeah, if I may.

MR. GRUEN: Yes.

EXAMINATION

BY MR. BRUNO:

Q Mr. Walzel or Mr. Kopecky, just on the wellhead itself, I think we're talking about the schematic so I do have a question. Going back earlier we talked about you don't want to exceed your wellhead equipment when we're designing the, you know, the --

WITNESS WALZEL: A Correct.

Q -- to overcome. Was the wellhead sufficient to overcome the --

A Yes.

Q -- the reservoir pressure?

A Yes.

Q So it wasn't limited by the wellhead equipment?

A No. Limited to how fast we could pump on it.

Q So it was limited by how fast you can pump but not the weight?

A Right, yeah. Well, it has a pressure rating. Every wellhead has a

pressure rating, 3,000, 5,000, 10,000 PSI, whatever it is. And, you know, you don't want to apply pressure that's more than what it's rated for.

Q Right. You don't want to yield a --

A Right.

Q -- piece of steel?

A Correct.

Q If you had a more robust wellhead on 25, would you have pumped at a higher rate?

A You would have to -- you'd have to look at the tubulars and all that but, you know, the wellhead was a design. It was fit for purpose in our opinion.

WITNESS KOPECKY: A My recollection, and I don't recall the number of the reservoir pressure, but I think my best recollection is the wellhead working pressure of 5,000 pounds pretty far exceeded that reservoir pressure.

Q Okay, so based on the reservoir pressure, the ensuing calculations, and the design, you weren't limited by the wellhead? You were able to design a good plan to go in with the first well built in?

WITNESS WALZEL: A Yes. I mean we

designed it to not exceed the pressure rating of the wellhead equipment.

EXAMINATION

BY MS. ROSE:

Q Would you have pumped at a higher pressure if the wellhead had been rated for a higher pressure?

WITNESS WALZEL: A If it was rated for it --

Q Yes, if it --

A -- and the tubulars were rated for.

Q Is it always better to pump at a higher pressure?

A Not always but, you know, if you pump at a faster rate, then you'll have a higher pressure --

Q Yeah, and that's --

A So, but --

Q -- desirable?

WITNESS KOPECKY: A Well, just to clarify again, the wellhead was normal. You wouldn't find a higher rated -- on this type of well, you would not find a higher rate working pressure assembly anywhere.

Is that accurate?

WITNESS WALZEL: A Yeah.

EXAMINATION (resumed)

BY MR. GRUEN:

Q So this was -- what that means is this is the highest pressure which you could pump on this particular well?

WITNESS WALZEL: A Correct.

Q Why is that the case, that this is the highest rated I guess, the highest pressure at which you could pump based on this wellhead for this kind of well?

WITNESS KOPECKY: A Your wellhead design is based from when the well is drilled taking in consideration your formation pressure.

Q Okay. And so this --

A Whereas, your formation will not exceed the rated working pressure of your surface equipment.

Q So if you pumped at a higher pressure than what this wellhead was designed to handle, what would have happened?

WITNESS WALZEL: A Well, if you exceed -- I mean there's a possibility of your wellhead equipment failing if you exceed the rating of it.

WITNESS KOPECKY: A Correct.

Q All right, okay. In terms of -- I want to just go back to the timeline for a

second. You talked about being there for about 28 days, and I think you were talking about three to five well kill attempts. In terms of that, how quickly did you get the drilling records when you asked for them? When did they provide -- when did SoCalGas provide those to you?

A I don't know that. Danny may.

WITNESS WALZEL: A As I recall, they had them with them already.

Q And same then for the resistivity logs?

A Yes. It was a folder and all the documents were in it.

Q Okay. All the documents you needed to do your work?

A Yeah.

Q Okay, I follow.

WITNESS KOPECKY: A And just, if I can interject, when I stated 28 days, that's because I spent approximately 28 days which I think everyone is aware, I think the event was a little longer than that. I had rotated out.

Q Gotcha. Thank you. I appreciate that and thanks for the reminder on that. Were you there longer, Mr. Walzel?

WITNESS WALZEL: A I was. And I

either got home on December 4th or December 14th. I think it might have been the 14th.

Q Let's see if I'm doing my math right here. So you would have come out --

WITNESS KOPECKY: A I took the call late October, I think, very end, 28, 27 October. I returned to Texas, to Houston, late November so that's the best I can --

Q Right around Thanksgiving it sounds like, give or take?

A Right, right -- no, I think I missed that. I did.

Q Oh, is that right? Okay. You had Thanksgiving at Aliso Canyon?

A Right.

WITNESS WALZEL: A Yes, we did.

MR. SHER: Probably wasn't a laughing matter.

MR. GRUEN: Q I laugh now, but I wouldn't have been laughing then either. Do you recall how long after Thanksgiving you had to stay?

WITNESS KOPECKY: A I don't. I know I was there approximately 28 to 30 days.

Q Okay, that's helpful. And you were there. So, Mr. Walzel, you were there another week to two and a half weeks

yourself?

WITNESS WALZEL: A Correct.

Q The extra time that you were there, were there any additional well kill attempts that you recall?

WITNESS WALZEL: A I don't -- I know by when I had left, there had been no more attempts. And I don't know when -- I don't remember what day the last one was, but towards the end of my time there, it was already had turned into, you know, relief well.

And the last week or two is I would say we were just there to, you know, monitor the 25 site and keep it secure, monitor it while they -- while they got ready for the relief well. And then I made a few trips down there to the rig while they were rigging up.

Q Yeah.

A But they didn't -- they hadn't started drilling by the time I got out of there. They were still in the rigging up process.

Q Okay. And after you both left, especially after you left since you left later, Mr. Walzel, did Boots & Coots recommend any additional well kill attempts?

A No.

WITNESS KOPECKY: A I have no knowledge either of that.

Q Do you know if SoCalGas tried any additional well kill attempts after you both left?

WITNESS WALZEL: A No. As I recall, there was no more. I mean after the last one we did, the decision was made to go in the, you know, relief well.

Q Thank you.

MR. SHER: Can we go off the record?

(Off the record.)

(Whereupon, at the hour of 12:00 p.m., a recess was taken until 1:00 p.m.)]

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AFTERNOON SESSION - 1:10 P.M.

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EXAMINATION (resumed)

BY MR. GRUEN:

Q So a couple points of clarification, I think before, during this morning, you'd mentioned that Danny Clayton was the team lead?

WITNESS WALZEL: A Uh-huh.

Q What does that mean being the team lead? What did he do in his role?

WITNESS KOPECKY: A He communicates with the client directly, and coordinates a plan with the client, and then we would execute the plan.

Is that fair, Dan?

WITNESS WALZEL: A Yes.

Q Thank you.

Did Danny, on the Boots & Coots' side, also talk to anyone else in order to execute the plan?

MR. SHER: For clarification, "Mr. Clayton"?

MR. GRUEN: Thank you, Danny Clayton.

Q Did you understand I meant Danny Clayton?

WITNESS KOPECKY: A Yes.

Q So when you were doing your work,

you would report directly to Danny Clayton?

WITNESS WALZEL: A Correct.

Q And as far as you know, Danny was -- basically, Danny was making the decision on the Boots & Coots' side about how to move forward; is that fair?

WITNESS WALZEL: A Yes.

WITNESS KOPECKY: A Yes.

MR. SHER: Clarify, with input from the rest of the team?

WITNESS KOPECKY: A Correct.

WITNESS WALZEL: A Yes.

MR. GRUEN: Okay. That's helpful.

Q Given the time you were out there and what your experience was on the well-kill attempts on SS-25, do you think that Southern California Gas Company could have seen the incident coming beforehand?

WITNESS WALZEL: A I don't believe so.

WITNESS KOPECKY: A I don't believe there was any way to see that.

Q Okay. And that's true even if you had been in their shoes, given all the experience that you have, would you have been able to see it coming beforehand?

WITNESS KOPECKY: A No.

Q Do you agree?

WITNESS WALZEL: A No.

Q That makes sense. I just want to ask you a little bit about what you think caused the incident there to best of your knowledge. So given your experience and background, not only with wells in general, but with what happened on SS-25, to the best of your knowledge, what do you think caused the incident?

WITNESS WALZEL: A I can't comment on what caused it. When we got through, there was a hole in the tubulars somewhere, but as far as what caused it, we weren't -- that wasn't -- we didn't look into what caused it.

Q Okay. That's fair.

Anything to add?

WITNESS KOPECKY: A No. I agree.

Q Have you seen any pictures of Well SS-25 since the incident?

WITNESS WALZEL: A No.

WITNESS KOPECKY: A No, I have not.

Q Okay. And that includes any pictures of any of the tubing or the casing that's been removed from the well, you haven't seen anything?

WITNESS KOPECKY: A No, sir. I have not.

WITNESS WALZEL: A No.

Q Thank you. This is a set of

questions. I want to understand about some of the earlier well-kill attempts and if those could have damaged the well or hurt the chances of the later well-kill attempts succeeding.

So once the first well-kill attempt didn't work, how did that impact the second well-kill attempt?

WITNESS WALZEL: A Well, the first one, I don't remember how many barrels we pumped total. As I recall, we shutdown. I recall we shutdown early, and regrouped to talk about it because things weren't going as, you know -- to talk about what we seen before continuing on.

Q Okay.

A And then on the second one, you know, I think the fluid weights stayed the same. I mean, I don't think we changed fluid weights because we had already come up with that number. There was Barite pill that was going to be pumped at the end, and maybe those volumes changed. Maybe one time we didn't pump a Barite pill, but as far as hurting the well, you know, I didn't see anything from -- from pump pressures or anything to say that anything within the well changed. The only thing that changed was the

area, the area around the well.

You know, initially there was just gas, you know, coming, you know, various places around the pad. And then after one of those pumped jobs -- might have been the second one, but, anyway, all the gas was coming up around the well, and blew the dirt up from around the well, and we had to go secure the well to keep it from -- stable and, but that was the only thing I observed to change was the area around the well.

Q When you observed the change in the area around the well, was that after the first Boots & Coots' well-kill attempt?

A I don't recall if it was after the first or maybe the second one.

WITNESS KOPECKY: A I agree.

Q You agree?

WITNESS KOPECKY: A What I mean is I don't recall if it was the first or second well-kill attempt when the ground deteriorated.

Q I see. Okay. Do you have any idea why the ground deteriorated after the first or second well-kill attempt?

WITNESS WALZEL: A I mean, I can't -- I can't say why, other than we were pumping fluid in there at, you know, whatever rate we

were pumping, you know, and it'd circulate mud up, and, you know, it's going to the path of the least resistance and made its own path.

Q Anything?

WITNESS KOPECKY: A I agree.

MR. SHER: Clarification?

MR. GRUEN: Okay.

EXAMINATION

BY MR. SHER:

Q Does that mean as your pumping down through the well, the fluids are escaping at some point from the tube where maybe there's a hole where the gas was going out and that's coming -- that's causing erosion around the well?

WITNESS KOPECKY: A Well, it was coming to the surface, some of your fluids.

Q Okay.

WITNESS KOPECKY: A Not all would come.

WITNESS WALZEL: A Right. There's no way to tell like we pumped 800 barrels and we got 600 back because the return for his company. Out and around the well, there was no way to measure.

WITNESS KOPECKY: A No time --

WITNESS WALZEL: A No way to measure.
WITNESS KOPECKY: A -- capture.
WITNESS WALZEL: A Losing to the formation.
Q I went down to the wellsite and there was just a big hole and lots of oil residue and so forth. So the liquid that was getting pumped was coming up and caught in that earth around --
WITNESS KOPECKY: A Yes, sir.
WITNESS WALZEL: A Right. We were pumping down the tubing, and it was coming out of the tubing because we did set a plug in the tube and then perforated it; so it was going out the perforations, up the casing, and then exiting wherever the hole was in the casing.
MR. SHER: Okay. Thank you.

EXAMINATION (resumed)

BY MR. GRUEN:
Q What do you think -- what did it look like was coming out of the ground?
WITNESS WALZEL: A The fluids we were pumping in and gas.
Q Okay. How far were they going when you were out there looking at them coming out?

WITNESS WALZEL: A How far was what going?

Q The fluid and the gas.

WITNESS WALZEL: A The fluid was, if I recall, it was coming up from around the well and then there was some trenches, catch pits, and it was going there and they were collecting it from there.

Q Was it shooting up into the air or was it just kind of running along the ground? Or what did look like?

WITNESS WALZEL: A with the gas, it was -- I don't have a word to describe it, but there was some mud coming up.

WITNESS KOPECKY: A Right.

WITNESS WALZEL: A As you're pumping the gas you're -- the activity of the gas because you're pumping on it, but just the gas breaking out through the mud. It was coming up out of the cellar. Call it the cellar there around the well.

WITNESS KOPECKY: A Percolating, kind of.

Q Okay. Okay. All right. So I think just running through those from maybe the second to the third - let's say - I think you mentioned, Mr. Kopecky, three to five attempts. I'll assume just for the sake of

asking questions - and maybe I'm not quite right - it's maybe five attempts, and just for purposes of asking you what you noticed in terms of the changes from the second to the third attempt, to the third to fourth, and the fourth to fifth. Does that make sense?

So I'm just trying to get a sense of how things -- what impacts to the well the second attempt had, for example.

So anything that you noticed that was changing or damaging the well from the second --

WITNESS KOPECKY: A Well, as Danny mentioned, we didn't notice any changes to the well, and, of course, my changes would be visually because I was located at the well.

The only changes that were noted were the cratering of the location around the well. And, again, I think -- I think there were probably -- I said three to five. I really think it may have been four, but I'm not sure, but I think it was probably after the second that we had to move our pump equipment and all further up the hill to get it off the location because it was deemed unstable, if you will. We didn't know how much erosion was going to continue on the

next kill attempt; so we just physically had to move everything.

Q Did you notice the cratering continue as you moved to the later attempts, to the third and fourth attempt?

WITNESS WALZEL: A Well, after each, you know, after each attempt, the crater might have grew just a little bit because, you know, you're introducing liquids, and, you know, its going to erode more than just if it's gas. So, you know, the crater got a little bigger each time.

Q How did that change what you did in terms of the kill attempts as the crater grew?

WITNESS KOPECKY: A Well, we -- and I don't recall if it was after the first kill attempt, but we strengthened the catch pits and got equipment in to create more berms, if you will, more levies to direct any flow we had from the pumping. And, of course, we had, you know, extensive monitoring, gas monitoring, and I don't know if that covered everything.

WITNESS WALZEL: A Yeah. And also in-between whether it was the first and second or the second to third, we had to get -- well, we got all the logging tools,

you know, the logging equipment to run the noise tamp and the spinner, and we attempted a gyro. We ran a gyro, too, and that was for, you know, if we lost the well, we would have an accurate survey for the relief well drill, you know, as a contingency.

And before the -- it was after one of those kill attempts, you know, we had, you know, fluid in the tube. And, anyway, ice formed a plug in the tube. And so we had to get a cold tube and heat it to go through the ice plugging, or the ice had formed in the tube so we could gain access to run our logs.

MR. SHER: Would ice have formed because of the cooling gas?

WITNESS WALZEL: A Correct.

MR. GRUEN: Q So was ice forming -- was more ice forming in the later well-kill attempts compared to the earlier ones?

WITNESS WALZEL: A I don't -- there was only one time we had to get ice out of the tubing. Now, whether there was anything different going on, I can't say other than after the second attempt or third attempt, there was still a column of fluid in the tube and that froze.

Q Okay.

WITNESS WALZEL: A You know, after all

the other ones, all the fluid might have left the tubing and there wasn't any liquid left to freeze there.

Q Anything you want to add, Mr. Kopecky?

WITNESS KOPECKY: A No.

MR. BRUNO: Darryl, if I may?

MR. GRUEN: Yes.

EXAMINATION

BY MR. BRUNO:

Q Did SoCalGas indicate any ice plug before your arrival or once you got on board before the first Boots & Coots' well-kill attempt?

WITNESS KOPECKY: A Not to my knowledge.

WITNESS WALZEL: A I don't recall any discussions about ice plugs.

Q Am I right to gather that the -- it's the kill fluid that froze with the combination of the leak?

WITNESS KOPECKY: A It could have been kill fluid and well-bore fluid.

WITNESS WALZEL: A Right. After one of the pump jobs, you know, the only thing that would have been in the tubing would have been the fluid we pumped; so it would have been the kill fluid.

Q Okay. And then if I may, I think Mr. Gruen hit on this, but the erosion that occurred around wellhead, your kill attempts, your subsequent kill attempts, those weren't modified; right?

You moved equipment and whatnot, but you didn't have to change your procedures or did you do anything different that absent erosion you wouldn't have done?

In other words, did you execute the optimal plan that Boots & Coots wanted to?

WITNESS WALZEL: A Yes.

Q Did you have everything you needed to do at your job?

WITNESS WALZEL: A Yes.

Q And that includes all the information from SoCalGas; did you have all the information you needed from SoCalGas?

A Yes.

Q What about real time information; in other words, from the first kill attempt and subsequent, just talk about what you're learning a little more. I think you said you shutdown at one point and you had a conversation?

WITNESS WALZEL: A Right.

Q That appears to be typical. Like you would -- real-time information you would

incorporate that into your plan; am I right in assuming you incorporate everything; in other words, what went wrong on the first one and how do we adjust the second one?

WITNESS WALZEL: A I mean, nothing went wrong, you know. Just the observations of, you know, when we pumped mud down the tubing, it -- we got it back. You know, we could see it coming out of the well way before it was expected to.

You know, the time that it took for mud -- I call it good returns, but a good amount of returns coming back from the well. That came a lot later than what we figured; so, you know, it was just observations like that. And then one time we pumped down the anulus, and all we -- we tried to pump plugging material. We got it back right -- and it came right out of the ground.

Those were just the observations that we saw, you know, and any real time we would have pump pressures.

Q And all the real-time information you just described, had you seen something like that before on a natural gas reservoir storage feel?

A A blowout?

Q Just the conditions, not exactly

matching what had you anticipated.

WITNESS WALZEL: A Oh, every job is that way.

Q So there was nothing really different then about SS-25; the kill attempts I'm talking about.

WITNESS WALZEL: A I mean, not it comparing to others, but, you know, a lot of time you don't know the whole -- what the pieces of the puzzle are down below the ground until you kill the well. So a lot of times its, you know, running your logs. It's a process of elimination -- not elimination. You try one thing, okay. Try something else, and, you know, so but -- I mean, it looked just like any gas release from an oil well.

Q And that's true all the way from the beginning to the last kill attempt?

A Yes.

EXAMINATION

BY MR. SHER:

Q With regards to the formula that was used to figure out how much weight or pressure you could push down the kill materials, does that make sense?

WITNESS WALZEL: A That wasn't a formula, just the wellhead has a pressure rating of 5,000 PSI.

Q So then in order to figure out the mud weight, there a formula one uses that has inputs. You talked about the pressure, the length of the column.

Does one take a look at the inputs after different kill attempts to see maybe if our inputs were not right, and by "our inputs" I mean SoCalGas inputs.

WITNESS KOPECKY: A You mean like by the depth of the well or something of that nature?

Q Yes. You stopped your meeting early because the first well-kill attempt didn't work and you break and have a meeting and I'm assuming everyone is brainstorming as to, Okay, it didn't work. What do we think we need to do next to try and kill the well. Does one relook at the data that was inputted into that formula?

WITNESS WALZEL: A Well, I mean, the reservoir pressure wouldn't have changed, you know. I mean, it was -- decreased slowly over the whole time we were there; so it wouldn't have changed, and they would keep the record of what the pressure in the reservoir was the whole time.

Q And then the amount of gas in the column, would that have been a variable that

would change as one factor?

WITNESS WALZEL: A In the block well or just the normal -- or just another well in the field that they might have been reading pressure off of?

Q Let's go with SS-25 and the blowout well. What would you expect the amount of gas in the column, that figure that gets inputted into the formula, to change over each well-kill attempt or would you expect that data to remain the same?

WITNESS WALZEL: A Well, yeah, the column in -- if it would have been SS-25, it would have been the gas blowing out, you know, from whatever hole and that would be dependent on the, you know, if the flow path changes or if the reservoir pressure decreases, and there's a lot of variables in that. I was just talking about the column of gas in a static well.

You know, if you have a pressure, you know it's 100 percent gas, you calculate the reservoir pressure, but, I mean, yeah, the amount of gas flowing, I mean, it wouldn't have been constant every second of every day.

Q And please understand, I think, for all of us none of our questions are meant to

undercut or question your professionalism and expertise and experience. It's not our intent. We are trying to understand what happened, we're lay people.

So to me what I'm hearing is that because every well is different, the basic formula may not work. If your inputs are completely different, how do you figure out -- I'm sorry if I'm muddling things here.

If you couldn't -- I apologize, guys.

MR. GRUEN: Take your time.

MR. SHER: Q The relief well ultimately stopped the leak; correct?

WITNESS WALZEL: A Correct.

Q In your experience working on natural gas storage fields that have once been oil production fields, to the degree you've had other experience --

WITNESS WALZEL: A Uh-huh.

Q -- with blowouts, was SS-25 unique in that you couldn't stop that -- one could not stop that from the top?

WITNESS WALZEL: A Can you repeat that?

Q Sure. The understanding that every field is different and that even wells on a lease may be different, different geology, et

cetera, but I would expect that generally the Boots & Coots of the world, the Halliburtons, the folks that have experience killing wells are generally successful because we don't have all these wells all over the world that are leaking as far as we know, but in this instance, it took a number of attempts to try and do a top kill and it just didn't work.

WITNESS WALZEL: A Right.

Q So in looking back, why do you think the top kills didn't work?

WITNESS WALZEL: A Well, I mean, they didn't work because we weren't able to get enough hydrostatic in the well bore to be equal to or higher than the reservoir pressure, you know.

It comes down to was, you know, the gas velocity exiting well bore, we couldn't overcome with the limitations that we had for pump rates, which were tied to our pressure, which is tied to the wellhead equipment, and, you know, there was still a lot of unknowns at that time: Where the hole might be; what -- where the gas was coming into the well and leaving the tube, and, you know, there's still some unknowns, but it all comes down to, could we pump fast enough and not exceed our pressures of the wellhead.

Q Based on the experience of SS-25 and understanding limitations that the wellhead was only able to take 5,000 PSI, for example, would a future remedy, if we're thinking about future remedies and trying to prevent these kinds of leaks requiring a wellhead that could take 10,000 PSI? Would that be something as a remedy you guys might suggest?

WITNESS WALZEL: A I mean, I can't --

WITNESS KOPECKY: A We can't honestly say or say at all that had we been able to pump at a higher rate we would have been successful. We're not sure. We weren't able to.

Q Part of what we need to do as a Commission is figure out how we prevent these kinds of leaks in the future. So we don't have the kind of expertise you do, and so it would be very helpful for us to understand maybe we need to require our gas operators to have equipment that can take a different pump rate.

Does that make sense to you?

WITNESS WALZEL: A I mean, there was already a hole somewhere; so, you know, I can't really comment on, you know, high pressure wellheads, but, you know, the

wellhead was five. The casing, you know, whatever. You just don't look at the wellhead. It's the casing, design and everything. So you know, I don't really know if I can comment on that.

EXAMINATION

BY MR. BRUNO:

Q Mr. Walzel, what about reservoir pressure itself?

WITNESS WALZEL: A Uh-huh.

Q Had you -- was the reservoir pressure that you were given was that different in any way or is that the pretty standard typical pressure you might -- was it extraordinary the pressure?

WITNESS WALZEL: A No. No.

WITNESS KOPECKY: A No.

WITNESS WALZEL: A I mean, I'm not a -- I don't have any history of the rock mechanics of the reservoir. As far as the pressure, it didn't seem out of the ordinary.

Q And the pressure is proportional to the working gas inventory?

WITNESS WALZEL: A Yes. The more gas in there, the higher pressure you're going to have.

Q So given, for instance, 86 billion cubic feet of gas, which, I believe, is the

capacity at Aliso working gas. If you cut that in had half and you're down to 43 or give or take BCF, am I correct that a leak at that reservoir pressure would be -- would it be easier to develop a hydrostatic head to --

WITNESS WALZEL: A If it's a lower pressure, yes.

Q Okay.

A Dependent on -- you know, still dependent on the exit velocity, gas velocity coming out of the well bore, too, but, yes, if the reservoir pressure, it will take lighter fluid, you know.

Q If I may, you know, just to make sure I understand, going back to that first kill attempt with the known reservoir pressure, your team had everything they needed on paper to overcome that pressure?

A Yes. If -- if -- I mean, we still didn't know how the flow rate of the gas coming out, but, you know, it was sufficient fluid, and, again, we pumped on it, but you're still limited to the pump rate, you know.

Q How does one determine the flow rate in a blowout?

A Well, there's a lot of complex equations, you know. There's still a lot of

unknowns in the well bore. Where it's exiting, but, you know, theoretically it would be reservoir properties and pressures -- reservoir properties, you get absolute open flow.

Q So the flow rate deter- -- I guess a number of factors can influence the flow rate? Path of the gas if its changing?

A Right.

Q Is it possible to apply some advance formula to get at the flow rate, if you will, to make -- make a best estimate?

A Yeah, like I said, they all calculate -- you can find an absolute open flow rate. You know, that number right be in the ballpark, might not be. There's so many other variables that you don't -- there's lot of blocks we don't even know what the -- you know, what it's actually flowing until you put it -- cap it and put it in diverter lines and get pressures and whatnot.

That would have been the most -- that's one way we could figure it out if it was 100 percent gas or whatever, but, you know, still at the end of the day, it's -- if we're going to pump, this is how fast we can pump, and you know.

Q Right. So did Boots & Coots

calculate a flow rate?

A I don't recall if we did, or it was given to us, you know. I didn't calculate one.

Q Did Mr. Clayton, perhaps, calculate one?

A No.

Q Would it be common for the owner-operator to give you that piece of information?

A Yeah, sometimes.

Q Again, my understanding is this is something you calculate.

Let me back up. If there's no leak and you're just flowing gas, you can calculate a flow rate?

A Yeah, you'd a choke, and you'd go through a choke, and you'd have upstream and downstream pressure and choke size.

Q In that same situation, when you have a leak and it finds a new path, you have a different flow rate?

A The hole size is different.

Q So all those variables would affect it.

A Right.

Q So that would have been something that SoCalGas would have had to calculate

after the blowout?

A To get an estimate of the -- right. Yeah. I mean, to get an accurate -- I say accurate. To get another estimate of the gas flow rate.

Q And that is a mathematical equation or is that a physical measurement?

A It would be a calculation, you know. You could physically do it if you could put it in a pipe line and get two pressure ratings and you know your pipe size, you know, but we weren't able to do that.

Q So sort of a fixed volume and then calculate --

A It would be more of a fixed area and length of flow in it and a pressure drop, and you could get a calculation on.

Q Got it.

Do you know if that was done by SoCalGas at least or would that help you at all?

A It was impossible.

Q Okay. So then you're limited to a mathematical estimation?

A Right.

Q Do you know if that was done by SoCalGas?

A I can't say if it was or if it

wasn't.

Q Okay. How was -- if I may, how was the morale of the Boots and Coots kill team over time, the first kill attempt, the second first kill attempt, I mean, or the team becoming discouraged or is it just par for the course?

A No. I don't think -- there wasn't any -- morale stayed high, the same. Yeah, it's frustrating that it didn't die, but it didn't affect our --

WITNESS KOPECKY: A Work duties.

WITNESS WALZEL: A -- morale.

Q Okay. Then when the decision was made for a relief well, was it understood amongst the team that you tried everything in your arsenal and that was the next step?

WITNESS WALZEL: A Right. Yes. It was the next step. It was the right decision. You know, we tried. We don't want to make it any worse here; so let's drill a relief well and intercept at the bottom of the well.

Q Yes, sir. I understand. Thank you. What about mechanical valves on the well? Did Boots & Coots check to see if there were any subsurface safety valves on the well as part of the planning?

WITNESS WALZEL: A I mean, we would have looked at the well design and note it. If it was in the well design, then it would have been in the well, you know.

WITNESS KOPECKY: A To my recollection, there was no subsurface safety valve.

Q That's consistent with my understanding too. I guess, my question is, had SS-25 had a subsurface safety valve, would you have attempted to use that before first top-kill attempt?

WITNESS WALZEL: A Well, the safety valve would have been in the tubing, and the problem was on the casing, and so shutting it on the tubing wouldn't have affected the gas exiting on the casing.

Q Is there a valve -- is there any type of valve, based on your experience, that would have been effective had it been designed in?

WITNESS KOPECKY: A No.

WITNESS WALZEL: A No. Not to prevent a leak in the casing.

EXAMINATION

BY MR. SHER:

Q Question on that: So we have the reservoir at the bottom about 8,000-odd-feet

deep, and then we have the casing, and inside the casing we have the tubing; is that correct?

WITNESS WALZEL: A Correct.

Q Is it normal for gas to come up the casing, or does gas come up the casing because the owner-operator is using both to withdraw?

WITNESS WALZEL: A Depending on the designs, but, I mean, we've seen, you know, different parts of world that have high production. They'll produce from the casing and tubing, or, you know, there's no set design rule, I guess.

Q With regards to SS-25, do you know whether the owner-operator was using both the casing and the tubing to withdraw or inject?

WITNESS KOPECKY: A I believe both.

WITNESS WALZEL: A Yeah. I mean, I believe it was both.]

Q And I really appreciate -- we didn't understand the safety valve would only be on the tubing. So I really appreciate that information.

A Right.

Q Just on that note, just to make sure I understand and drill this into my head, if you had a subsurface safety valve on

SS-25 and you were flowing through the tubing and the casing, it would not be effective.

A It wouldn't have prevented the gas from exiting the wellbore in this case -- scenario. The subsurface safety valve is in the tubing. So say your wellhead gets knocked off or your tree gets knocked off, you know, you shut it and it's done, but if it's exiting somewhere else in the well, it's not going to --

WITNESS KOPECKY: A And it's typically not located very deep in the tubing string.

Q In your experience, can you give an idea of where you find them, if you can?

A I want to say 200 to 700 feet.

Q Okay.

A Best recollection.

Q So once an operator is -- decided to flow through tubing and casing, there is no mechanical equipment to not -- to mitigate the consequences of a leak -- in other words, once a leak happens or a blowout happens, there is no mechanical valve or anything that could shut that in, if you will? It's basically top kill or relief well at that point?

A I don't recall if the well had a packer.

MR. SHER: Q what is a packer? Is it P-A-C-K-E-R?

WITNESS WALZEL: A Yes.

WITNESS KOPECKY: A P-A-C-K-E-R.

WITNESS WALZEL: A Like when you run tubing, there's a packer that goes around the tubing and seals off between the casing, but I don't recall if there was a packer or not but -- how they were -- how it would have been flowed both ways. But a packer would just seal off around the tubing and the casing. So then all your flow, if you have integrity, is just up and down the tubing.

Q Does one install the packer when one drills the well?

WITNESS KOPECKY: A No.

WITNESS WALZEL: A No.

Q So can you install a packer at any point in the life of the well?

A Well, there's packers you can run in casing and storm packers, test packers. Yeah. I mean, there is bridge plugs and stuff, but you know, their application, it wouldn't be --

WITNESS KOPECKY: A It would be installed during the completion phase or work-over phase.

WITNESS WALZEL: A Yeah, the tubing

packer would have been, yeah.

Q I'm sorry. And the packer would, in the case of Aliso, may be as deep as 8,000. So it's close to the bottom weight reservoir?

WITNESS WALZEL: A Right.

MR. SHER: Thank you.

MS. ROSE: Would having a packer in the well preclude you from using the casing to extract gas?

WITNESS WALZEL: A Not necessarily. It depends on your tubing design, you know, if you have a sleeve you can open or close, you know. Yeah, I mean, if there wasn't any sleeve, but typically, there's a sliding sleeve or something in there for various reasons, but yeah. No, it wouldn't a hundred percent isolate them.

MS. ROSE: Okay.

MR. SHER: Q Have people, just in general, talked to you guys based on your experience and expertise in -- whether it's offering you a chance to give a training or one of these classes that you guys take to keep up to speed with what's going on in the industry. Because you guys have tons of experience. So are you able to offer advice as to -- to owners and operators or

regulators as to how to be as safe as possible in your well design so you can avoid leaks?

A Well, I mean, we've been asked, you know, by operators to come in and look at fields or whatever and give advice on, like, if there are drilling wells in urban areas. We've given advice on that. Or if we're asked to speak on a topic, then, yeah, we do.

WITNESS KOPECKY: A Or which they do a lot nowadays is multiple well pads. They invite us out at times to give them recommendations on the layout in -- to reduce the chance of multiple wells on fire at one time, that type of thing.

EXAMINATION (resumed)

BY MR. GRUEN:

Q A follow-up on the flow rate you were talking about earlier. I get you. It sounds like if it's short of it being a static well you may have some uncertainty about what the flow rate is? Did I get that part right?

WITNESS WALZEL: A Right. Yes.

Q Thank you. So I also understood you had mathematical estimations in the case of SS-25 because you obviously don't have a static situation there, right? Did I get

that part right?

A Yeah. When I said mathematical, a lot of times a number will be calculated with this pressure, this tubing and casing design. If the wellhead gets knocked off, this is how much gas theoretically will come out.

Q Yeah. And would you expect that number to change over time after an unsuccessful well-kill attempt?

A It will change over time if the reservoir pressure changes.

Q Here, SoCalGas was -- I think you said SoCalGas was reducing reservoir pressure?

A Yes. They were.

Q So that was being counted for in the change of the flow rate calculation?

A Yes. I mean, if you were to calculate, yeah, it would be used. Yeah.

Q You recall getting changes in the flow rate calculations based on the change in the reservoir?

A I mean, it wasn't calculated -- it's not something that would have been calculated daily or hourly -- I mean, since know one knows how much was coming out to begin with.

Q Yeah. I get you. I get you. So

what about too just with the gas escaping through the crater and that changed -- that's a change too just in terms of you go from one well-kill attempt to the next? How -- if at all, how would that change the flow rate calculation?

A I'm not following.

Q If you're not following it, it probably means I'm not getting it right. So just really quickly would the flow rate -- would you expect the flow rate to change after the first well-kill attempt?

A I wouldn't expect it to change much at all. I mean, the reservoir pressure hasn't changed probably hardly at all, you know, in a day. The gas just -- there was more gas coming up around the well as opposed to coming out little cracks elsewhere. So ...

Q Just for the sake of discussion, what if the reservoir pressure stayed the same?

A If nothing in the wellbore changes, then flow rate would stay the same.

Q So if something in the wellbore changed -- could something in the wellbore change after the first well-kill attempt?

A Not to my knowledge. The only

thing that changed was the earth around the well.

Q So that's not the same thing -- could that -- did you have a concern that that meant the wellbore casing -- that the wellbore was changing because of the change in the earth?

A No. No.

MR. GRUEN: Did I -- do you want to follow-up on that?

EXAMINATION

BY MR. BRUNO:

Q Yeah. Well, I just want to ask generally, in your opinion, being out there, did the leak change like -- or just the path? Do you think that more gas was coming out after the first well-kill attempt over time? Did the leak get worse? Did the blowout get worse?

A I can't say it got worse or better, because originally it was going out and coming up in several places, you know.

Q Sure.

A After it -- the crater formed around the well, all that stopped, and it was all coming up around the well. Whether that was more or less, I can't say.

Q So the path changed --

A It was isolated. It was all contained in one area instead of coming up in several areas. You know.

MR. BRUNO: Right. Okay. Thank you. Thank you, sir.

EXAMINATION (resumed)

BY MR. GRUEN:

Q Just a couple of questions about what was in the well during the attempt. So I think you had mentioned mud and perhaps brine being used?

A Mm-hmm.

Q One of the things we had looked at was something about a junk shot?

A Yes.

Q Can you talk about that? Was that used, and if so, what was in it?

A Right. So a lot of times we'll pump a junk shot, which is junk -- rope, golf balls --

WITNESS KOPECKY: A Rubber.

WITNESS WALZEL: A Rubber. Just plugging material. That day, when we did that, we tried -- we did pump it down the casing in an attempt to plug the hole in the casing, but I don't know how much -- how many we did, but I mean, we pumped golf balls and big materials just down the casing. As soon

as we pumped it, it was already shooting out of the ground, meaning it's exiting more to the surface of the well probably. We were getting it back really quick.

MS. ROSE: The golf balls?

WITNESS WALZEL: A Golf balls.

WITNESS KOPECKY: A So we determined that the hole was at least -- well, it also let us know that the hole was at least the size of a golf ball.

WITNESS WALZEL: A Right.

MR. GRUEN: Q Yeah. I follow your logic there. Any indications could you get from the junk shot of how big the hole was --

WITNESS KOPECKY: A No.

Q -- aside from that? Okay.

I guess the other thing I'm gathering is sometimes a junk shot works?

WITNESS WALZEL: A Oh, yes.

Q How often -- how many junk shots did you try?

A I can't -- I can't recall the specific number, but we'd pump several -- we loaded it several times that day, but I mean, we just couldn't get anything to plug the hole. The idea would be to plug the hole, keep pumping down the casing into the well, but nothing was plugging the hole.

Q Yeah. I follow you. Okay. And after the junk shot didn't work -- or the junk shots -- maybe I guess it was a couple times. Did that change how you tried to kill the well after that?

A No.

Q Okay. So you're back to mud or brine at that point?

A Right.

Q One thing in our notes too -- I think we just wanted to clarify, and I want to echo Nicholas. We're not -- this is respect for your professionalism today and the answers you've given us. We're not trying to undermine it in asking this. We're trying to just understand, as lay people, what happened.

So I note that it's three years ago. I'm just going to raise this. One thing in our notes is that there was another well-kill attempt. It looks like there was a top well-kill attempt on December 22nd or so. Does that ring a bell -- or maybe our notes are wrong. It could well be.

A I wasn't there, but I don't recall ever hearing about another one on -- that late.

Q Okay.

A Unless that was -- I don't even remember what day it got intercepted or -- no. I don't have any knowledge of one on December 22nd.

Q Understood. Thank you.

WITNESS KOPECKY: A I was already -- I was on another job, and I had lost contact with anyone affiliated with it. So I'm not aware of it.

Q That's helpful.

EXAMINATION

BY MR. BRUNO:

Q Who relieved you from Boots & Coots? Was there another --

WITNESS KOPECKY: A Yes, my recollection it was Juan Moran.

Q Would you mind spelling that, sir, or is it "Marin"?

A Let me make sure it Moran -- it was Juan Moran or Travis Martel. I don't recall which, but -- spell it? Is that what --

Q I was just trying to make sure I understood the pronunciation.

A J-U-A-N M-O-R-A-N or Travis Martel, M-A-R-T-E-L, and I don't recall which one relieved me.

Q Thank you, Mr. Kopecky, and Mr. Walzel, how about yourself? Were you

relieved by any Boots & Coots employees?

WITNESS WALZEL: A I was relieved -- there was Jim LaGrone and Rolly Gomez were engineers for Boots & Coots after I left to help with the relief well and activities at SS-25.

Q Okay. Thank you, sir. J-I-M L-A-G-R-O-N-E, R-O-L-L-Y G-O-M-E-Z.

MS. ROSE: And do you know if Mr. Clayton stayed on, or was he also relieved?

A He came home and then went back.

WITNESS KOPECKY: A And I do recall -- now that I mention it, I believe Travis Martel relieved me, and Juan Moran, as the senior well control specialist, I believe, relieved Danny. And then Richard was in there at some point.

WITNESS WALZEL: A Richard was there. I believe Richard was -- relieved Danny.

MR. GRUEN: Can we seal the record.

EXAMINATION (resumed)

BY MR. GRUEN:

Q One thing -- I have an invoice here that mentioned the two of you and Danny Clayton and then Mike Baggett as well?

A Yes. He was our safety representative.

Q Okay.

WITNESS KOPECKY: A I don't know at what point we bought him, but it had to be pretty quick.

WITNESS WALZEL: A It was quick. He wasn't on the plane coming out with us, but he arrived shortly thereafter.

Q How long was he with you?

WITNESS KOPECKY: A He was there when I left.

WITNESS WALZEL: A He was there when you left, but then there was a -- Patton came and relieved him.

WITNESS KOPECKY: A Then he came back.

WITNESS WALZEL: A Then he came back. So -- and I think he stayed pretty much for a majority of the project.

MR. GRUEN: Let's take the seal off the record for a second.

Q I'm going to ask you the same question. Can you tell me how long Mike Baggett stayed with you?

A I don't have a number of days.

Q Approximately. I'm asking the same question as before.

A A month.

Q Okay.

A But then I believe he was there --

I was there a month, so he was there with me probably about a month.

Q Okay. All right. And as safety officer, what was his role?

A His main -- his role is to look out after us. A lot of times companies we work for don't want their personnel in the hot zone. So as we're in the hot zone, then he would be there for us and then also to work with the customer and explain if we're doing something a certain way that might not be normal -- I'd say normal, explain why we're doing it, enforce -- he was also there to check people in and out of location and keep track of the personnel on location.

Q Okay.

WITNESS KOPECKY: A Correct.

Q Thank you. Anything --

WITNESS WALZEL: A And gas monitoring. He also would check the gas levels.

WITNESS KOPECKY: A One direction.

WITNESS WALZEL: A One direction. He would actually be the first one to go up every morning and check the LELs one direction and permit the cranes to move in and stuff like that.

WITNESS KOPECKY: A There would always be two of us would go up --

WITNESS WALZEL: A Right, yeah.

Q I follow. Who else was -- if anybody -- was it the four of you then? Was there anyone else on the Boots & Coots team during the -- when you both were there on-site?

WITNESS KOPECKY: A Not to my recollection, other than Danny. Danny -- Danny, myself and Mike.

WITNESS WALZEL: A Then there was -- well, there was another -- Mike Patton, he was there -- he came for -- I don't remember if he was there when you were there.

WITNESS KOPECKY: A No. Mike -- because they joined me in Azerbaijan. But if you're asking who was there while I was there or while Danny was there, yeah, there was also -- Bud Curtis was later involved in the project.

Q Okay. Yeah. And --

A Richard Hattenberg.

Q I heard Mike Patton, Bud Curtis, Richard Hattenberg -- did I get that right?

A Richard Hattenberg.

Q Hattenberg. Okay.

A John was there at one point while I was there liaising with SoCal engineers in regards to relief wells.

Q So the court reporters are happy with me, I'm going to ask you if you can spell their names as best you can.

WITNESS WALZEL: A Richard, R-I-C-H-A-R-D H-A-T-T-E-B-E-R-G, Bud Curtis, B-U-D C-U-R-T-I-S.

WITNESS KOPECKY: A John.

WITNESS WALZEL: A J-O-H-N H-A-T-T-E-N-B-E-R-G, Mike Patton, M-I-K-E P-A-T-T-O-N, Bud Curtis, B-U-D C-U-R-T-I-S, Travis Martel, T-R-A-V-I-S M-A-R-T-E-L.

MR. SHER: May we go off the record for one sec?

(Off the record.)

MR. GRUEN: Let's go back on the record. Thank you.

Q A couple other questions. In terms of your -- you had talked about going into the hot zone after a while -- earlier this morning, rather. And just briefly, if you can talk about how do you figure out the limits of the hot zone?

WITNESS WALZEL: A Well, like for this well, it was pretty much the whole location, you know. There was one road going up to the pad. So just everything was -- the whole location was considered the hot zone.

WITNESS KOPECKY: A I recall, as

typical, yeah, it encompassed the entire location, as Danny said. That's due to your lower explosive limit readings out away from the source.

Q So --

A When they Start to decline, then you get into your warm zone and that type of thing.

Q So where the LEL is that a potential for ignition, that's the edge of the hot zone?

WITNESS WALZEL: A Yeah. That's one way to define it, or if there's a well on fire, it's -- you can use radiant heat, or there's -- or just whatever factors they want to use to set it up. But in this instance, it was mainly just LELs.

Q And Mr. Kopecky, I think you were talking about if the case -- in the case of a well being on fire, how would you define the hot zone? Sounds like you'd do it differently?

WITNESS KOPECKY: A Oh, no. That's what Danny was stating. With the radiant heat, that would determine your hot zone to your exclusion zones. But yeah, this was determined by the LEL. But when you mentioned -- I forget how you stated it, you

know. The end of the hot zone was at the lower -- I don't remember how you stated it.

Q I'll do my best to restate it if I can. What I think I was getting at is if your LEL is just at a point where your LEL -- your lower explosive limit could result in ignition, at that point, that would be the edge of your hot zone?

WITNESS KOPECKY: A Well, not necessarily. That's the point I wanted to mention is that you would also have a safety factor in that. You would move it out even further.

Q I follow you. Okay. And in this case -- so you were beyond the LEL limits --

A Correct.

Q In establishing your hot zone for SS-25?

A Yes, sir.

Q I follow. Thank you both. And then in terms of managing the hot zone and who was in it, can you tell us the different personnel that were allowed to enter the hot zone?

WITNESS WALZEL: A Depending on the operation going on but -- us, Boots & Coots. The crane operator would be there, his swamper. If we were doing wireline, then,

you know -- like when James and I were out there, we would put their equipment on the well, but they might be in their logging unit upwind on location. There was a company that had to pump iron and flow iron. They were, you know -- there was occasions they were in the hot zone.

WITNESS KOPECKY: A Also, anyone that did have a legitimate reason to be in the hot zone was always escorted by Boots & Coots and stayed with them the entire time. They were never left in there unattended.

Q Did that include SoCalGas personnel?

WITNESS KOPECKY: A Correct. It did.

Q And I think, Mr. Walzel, you were talking about some of the personnel. Those might have been contractors.

WITNESS WALZEL: A Mm-hmm.

Q So were there -- can you talk about the SoCalGas personnel -- personnel who were in there with Boots & Coots at times?

A Well, I mean, several times they would have a -- safety representatives up there on the edge with our -- Mike Baggett or whoever was our safety man. You know, just various -- management coming in to look, you know, things like that.

Q And what role did those individuals have when they were going into the hot zone?

WITNESS WALZEL: A Observe. Just take a look. They were safety men. Might do safety things. But if it was SoCal people, it was more or less just always just take a look at what is going on.

WITNESS KOPECKY: A Or they may come up with -- there were quite a few regulatory agencies that need to have a visual. They would be escorted in and a lot of times accompanied by, as Danny mentioned, a SoCal representative.

Q What were the reasons for Boots & Coots to go into the hot zone?

WITNESS WALZEL: A When there was a -- for instance, like I mentioned, we wanted to run the noise temp tools, then we would go out to the well and make up the lubricator so they could run their tools in the well. And we did that a lot. You know, when we went in to put cables to secure the wellhead, that was another example. Just whenever there was something necessary to -- run logs, rig up pump iron, remove pump iron, you know, just things like that.

WITNESS KOPECKY: A Close and open valves.

WITNESS WALZEL: A Close and open valves.

Q Thank you. Let me switch gears a little bit to -- I think you had mentioned that Brett Lane was incident commander?

A Yes.

Q Did I get that right? Okay. So just in terms of communication with the incident commander as you were being made aware of the incident, what was -- can you describe the communications that you had with the incident commander as you were first learning about the incident at SoCalGas at Aliso?

WITNESS WALZEL: A I believe -- I mean, we knew about it -- like I was mentioning, he wasn't there the first few days. So we already knew about it by the time he showed up.

WITNESS KOPECKY: A I'm not aware who was the incident commander when we arrived.

Q Okay.

MR. SHER: Q Would you have updated the incident commander on sort of a daily basis as to what was happening?

WITNESS WALZEL: A Yes. The communications -- there was always an open line to communication, talk to him in the

mornings, and it was an open dialogue, I guess.

Q And I imagine once you learned about the incident you were probably thinking about how -- recommending how to fix the incident?

A Yes.

Q So were you talking with the incident commander about fixes?

A Yes.

WITNESS KOPECKY: A No, not I. Not myself personally.

Q Mr. Walzel, can you tell us more about what you told the incident commander -- what you shared with the incident commander?

WITNESS WALZEL: A Right. I mean, I don't remember exactly what we talked about, but it would have been, you know, options of, you know, do we do this or -- you know, pump this. You know, it would have been kind of brainstorming different options and then pick an option that -- the best option, you know -- hope for the best results with the least amount of risk as far as, you know, affecting future operations.

Q What concerns, if any, did the incident commander identify to you when you were talking through the recommendations and

options?

A I mean, I don't recall any specific concerns, you know, other than what could happen -- you know, we outlined possibilities but nothing -- no specific conversation comes to mind.

Q Okay.

MR. SHER: Q Would Mr. Clayton have been the main liaison with Mr. Lane?

WITNESS WALZEL: A Yeah. He would have spent -- he was in the trailer with him most of the day.

Q So you were literally the boots on the ground doing the work, and some of your other team members may have been more doing, for lack of a better word -- I apologize -- but the paperwork?

A Well, yes. Initially it was Danny, James, myself, and then Mike Baggett showed up sometime. But yes, initially, if there was equipment to rig up or remove or whatever, it was me and James out there doing that. Then I would go to the trailer different times.

Q You mentioned you guys -- Mr. Kopecky, you got a phone call in the evening about 8:00, 8:30.

WITNESS KOPECKY: A Yes.

Q Then the next morning you flew out. Did SoCalGas provide you with anything to review on the plane on the way out or when you hit the ground at Aliso Canyon, you were given information?

A I can't say for sure, but now that you mention it, I'm -- I'm rather confident that there were some documents emailed to me. I feel confident that there were.

Q Makes sense to try to get you up to speed as quick as possible?

A Right. I'm pretty sure that was the case.

MR. SHER: Thank you.

MR. GRUEN: Q This is a while back, but do you remember what you were trying to do with the information -- with the documents that you received -- what did -- how did you move forward with that information?

A Well, the purpose of it would have been just to familiarize us with the well as much as they possibly could in that amount of time. And I think -- I'm not for sure, but it possibly included the wellbore schematic, which would have been a critical piece of information.

Q Yeah. Okay. Did you -- go ahead. I'm sorry.

A But you pretty much have to put your eyes on the incident. I mean, you can familiarize yourself with the downhole and that type of thing and you can start bouncing off a plan amongst the team, but that can all change when you get on the ground.

Q Yeah. I get you.

Mr. Walzel, anything that you recall receiving from the incident commander as you were on your way home?

A No. Not specifically, but it would have been, you know, directions to the well, wellbore schematic, just general -- like James, I'd just get kind of an idea -- casings might set here or depth here, tubing in the well, tubing not in the well, you know.

Q Is there any information that either of you requested when you -- during this time regarding the incident or regarding SS-25?

A No, I mean, we -- if you have any well history -- drilling records -- and that would have been to see if there was anything that happened while they drilled the well that might give an idea there might be a problem here. Just -- I mean, it was a long time ago, but we requested just stuff like

that. And everything we requested by them, I mean, they provided.

Q Okay.

WITNESS KOPECKY: A In an initial phone call, anything -- when I mentioned the documents that I think I received, they would have been requested by myself, because I was in communication with the client I think until I received a call 8:00, 8:30 and in communication back and forth until approximately 1:00 a.m. And any information Danny received prior to boarding the plane would have come from myself.]

Q Danny Walzel?

WITNESS KOPECKY: A Danny Walzel and Danny Clayton.

Q Danny Clayton, too.

Okay. So you were the sort of point or the liaison to receive the information from SoCalGas on Boots & Coots' behalf as the Boots & Coots team was leaving for Los Angeles?

WITNESS KOPECKY: A Correct.

WITNESS WALZEL: A He was first on call that night; so he received a call after hours from dispatch.

Q I see. Did the point of contact change before you came out?

Did someone else serve as the person to receive the information from SoCalGas or did you remain the information point for SoCal.

WITNESS KOPECKY: A Oh, no. I was not the information point once we landed. That would go into Danny Clayton.

Q Okay. And you were the information point until the Boots & Coots team landed in Los Angeles?

WITNESS KOPECKY: A Correct.

Q Right. I follow.

And then Danny Clayton took over receiving information throughout the incident; is that fair?

WITNESS KOPECKY: A During my time there.

Q Mr. Walzel, while you were there, since you were there a little bit longer that Mr. Kopecky, did Mr. Clayton remain the information point throughout your time there?

WITNESS WALZEL: A Yes.

Q Thank you.

Let's go off the record for a second.

(Off the record.)

MR. GRUEN: Back on the record.

Go ahead, Mr. Holter.

EXAMINATION

BY MR. HOLTER:

Q Gentlemen, this is for both of you as we visit the subject we talked about.

The information we talked about, getting from the Wall files and SoCalGas, and we talked -- Mr. Kopecky, you said dispatch notified you of a call from SoCalGas; is that correct?

WITNESS KOPECKY: A Correct. And the way it works, they patch me direct through.

Q And that was Todd Van de Putte that you talked to who went directly to you?

WITNESS KOPECKY: A If I gave the correct name. Yes.

Q Had you worked with him before throughout the years?

WITNESS KOPECKY: A No.

Q So this is the first time?

WITNESS KOPECKY: A (Witness nods head.)

Q And you, Mr. Walzel?

WITNESS WALZEL: A First time.

Q So you requested a set of information that you needed to assess their situation? You discussed it with them; is that my understanding?

WITNESS KOPECKY: A I don't know that

we were able to discuss it. They were in the -- here, again, I recall they were gathering information on the well for me.

Again, it was after hours. So I don't know what they had set up, but they did get -- I say, I think I recall they did send me some information.

Q Okay.

WITNESS KOPECKY: A That I then distributed.

Q Granted, your memory, I'm not going to press you on it. It's not the point.

So is it my understanding that once Mr. Clayton came aboard, did he assemble a team then within a matter of hours so to speak? Is that how it works?

WITNESS WALZEL: A Well, James, myself, and Dan Clayton flew out together; so that was our Boots & Coots team.

Q You explained you were in the hot zone or managing that. Are you driving -- what you're discovering -- now, we're moving to on the site, once you're out there.

Are you driving what information you have, including what you've read in the well files from SoCalGas and feeding that information to Mr. Clayton?

WITNESS KOPECKY: A Well, I wasn't --

other than, I mean, I didn't really have a real purpose to review the well bore schematic. Danny and Danny Clayton would have been looking at that, Danny in particular, to figure -- to do his calculations and all, but I guess, the second part of your question, were we relaying information. Any time -- since we were at the well itself, any time there was any change in anything, we would report it down to Danny that would then convey that to Lane, Bret Lane.

Q Appreciate that.

WITNESS KOPECKY: A Bret Lane.

Q Right. Bret Lane.

And when you refer to "Danny" doing calculations, can you clarify which Danny you are talking about.

WITNESS KOPECKY: A Danny Walzel.

Q So, Mr. Walzel, are you -- is that your role in this particular instance on SS-25 well to provide calculations based on information you gathered and provide that to Mr. Clayton?

WITNESS WALZEL: A Well, like I mentioned, but probably 90 percent of what, you know, James and myself did the same thing, hammer up iron, rig up, you know, if

there was -- Boots & Coots needed to write something or present something, then, yeah, then I would do the paperwork part of it. So 90 percent of what we did was the same.

WITNESS KOPECKY: A Right.

WITNESS WALZEL: A But, yeah, if we need to do a calculation or write a procedure, then I was one that did that.

Q Is that the structure that held until you both left that incident?

WITNESS WALZEL: A Yes.

WITNESS KOPECKY: A Yes.

Q And then are you aware of what Mr. Clayton did with that information after you gave it to him?

WITNESS WALZEL: A Gave to what -- I mean, discussed with SoCal.

WITNESS KOPECKY: A With SoCal.

Q Was there anybody from SoCal providing the same comparative calcs or working with you during this time, Mr. Walzel?

WITNESS WALZEL: A Yes. I mean, there wasn't someone working by my side the whole time, but their engineers were doing, you know, mainly relief well stuff and, you know, getting a plan for that, and, you know, doing engineering stuff in the office.

Q I'm actually trying to understand, again, on the same note, clarity, about who is -- if they're looking to you within your team --

WITNESS WALZEL: A Right.

Q -- and then SoCalGas supervising the calculations and which way the information is flowing, if it goes back and forth.

WITNESS WALZEL: A Yeah. It was back and forth. Like I said, it was real open. Anybody could go to anybody and talk or ask a question.

Q So on the SoCal team, can you provide some names of who was providing either engineering calculations or who the engineers you were, so to speak, bouncing off your approach with or position.

WITNESS WALZEL: A I don't remember their names.

Q But there was somebody from SoCalGas?

A Yes.

Q Was it Mr. Van de Putte?

WITNESS WALZEL: A No. He was -- my understanding was he was the consultant company man, and I think he stayed -- he was there for the first --

WITNESS KOPECKY: A Few days.

WITNESS WALZEL: A He was there for the first time because I know he was there when the coral tubing was doing ice plug --

(Clarification by reporter.)

WITNESS WALZEL: A At least for the first kill attempt. I remember him being there while we went and washed out the ice plug, but, no, he was the company man, and then I don't know their names, but there was two or three engineers.

Q So would it be Mr. Lane that you specifically your team's working with, meaning the four of you, Mr. Baggett, two Danny's --

WITNESS KOPECKY: A We worked a lot with a gentleman by the name of Mike Dosier as well, but that was -- that was -- I want to say logistics.

WITNESS WALZEL: A Yeah. Logistics.

WITNESS KOPECKY: A We were sourcing equipment, and he was our go-to to make that happen.

Q So I hear you that names don't come to mind, but, generally, during your time there, you were considered providing -- from what information you received from the site and files you were providing calculations to

make attempts to kill. That was your role?

WITNESS WALZEL: A Right. It wasn't like every day all day long we're just -- (indicating).

Q I understand.

WITNESS WALZEL: A 90 percent of it was the manual labor in the hot zone, getting ready for the next bump shot and stuff like that.

Q Understood. Results came out of first and second kill attempts. Is it my understanding that your -- you did not make any adjustments in, say, the calculations other than mud weights, and whatever, but as far as methodology it was the same procedure throughout as when you left.

WITNESS WALZEL: A From the best I can recall, the only -- one time we might not have pumped Barite, and another time we might have pumped -- changed the amount of Barite. At the end, we pumped a Barite pill with the idea of the Barite falling out and plugging up -- plugging the bottom of the well.

We might have changed the volumes, but, again, the pump -- we could only pump so fast, and so there wasn't -- other than what we pumped there wasn't a whole lot to change in between each one.

Q And then you were talking about you assessed there was a leak at some time?

WITNESS WALZEL: A Yeah.

Q Either immediately or -- was that specifically to that well or did you -- there's two other wells near it. Did you guys --

WITNESS WALZEL: A Correct.

Q -- look at those other two wells and put them into your mix --

WITNESS KOPECKY: A As I recall, we checked pressures on them.

WITNESS WALZEL: A We checked pressures daily. Or you know, we put gauges on all the -- on the wellhead, all the different --

WITNESS KOPECKY: A Casing strings.

WITNESS WALZEL: A -- casing strings, and I don't recall if we ran logs on one of them.

WITNESS KOPECKY: A I'm pretty sure we did, and we also attempted to monitor, I believe, those gauges while we were performing the kill to make sure there was no communication.

WITNESS WALZEL: A Right because those were the gauges that we could get on the phone.

WITNESS KOPECKY: A Yeah.

WITNESS WALZEL: A They were being continuously monitored 24 hours a day.

Q So SS-25 did not have that ability because of the gas flow coming out of it?

In other words, you're talking SS-25 was a dynamic kill attempt; right?

WITNESS WALZEL: A Yeah.

Q So can you restate whether you were or weren't able to get a flow rate at any time on SS-25?

WITNESS WALZEL: A No there was no time we ever got an actual flow rate coming from the well.

Q Okay. So your attempts were your best professional understanding based on the conditions of an unknown flow rate?

WITNESS WALZEL: A Correct.

WITNESS KOPECKY: A Correct.

Q And the gas company, SoCalGas, at any time did they give you any numbers of estimates of what they thought you should use for that?

WITNESS KOPECKY: A Not to my knowledge. You mean for the actual --

Q Yes.

WITNESS WALZEL: A No. There was numbers given -- again, you know, an absolute

open flow numbers that were calculated. No, if the well had got knocked off and it was coming --

Q Is that like what would be called a worst case calculation?

WITNESS WALZEL: A Worst case.

Q And you put your greatest overburden pressure on that as your putting calculations together?

WITNESS WALZEL: A I'm not following the "overburden."

Q Like you -- for your head.

WITNESS WALZEL: A I understand.

Q There you go.

WITNESS WALZEL: A Again, it's a rate. So now you got, you know, velocities and all this other stuff. It's not just like normal drilling where you're just choking out a well; you just pump it real slow.

But, yes, there was numbers given, you know, so what this well actually was, no one really knows because it was coming out in the ground. You know, there was no way to capture it or still looking for all the unknowns to figure out, but, you know, it would have been a ball -- you know, it would have been hard to get an exact number of what it was.

Q Understood. And this continued at least for the first two attempts, and then was there a point which a consultant was brought in to work with you?

Did you work with Mr. Shackleford at all?

WITNESS KOPECKY: A I was aware that he was involved, but I was long gone from the operation.

WITNESS WALZEL: A Yes. He came after I left, but it was more for the relief well.

Q So he didn't provide anything for the top kill attempts?

WITNESS WALZEL: A No.

Q Okay. Thank you.

And so at what point, after you assessed the leak was in SS-25, did you make an assessment or could you?

You talked about performing a jump shot. At what point did you make assessment like where that was in pipe depth?

WITNESS WALZEL: A the only -- yeah, there was no way to tell from pumping that and how fast it come out because I think it was like within the first five barrels, the stuff was already coming out, but the only thing, you know, when we ran the temperature log, you know, there was -- it was cold, say,

800 to 1,000 feet.

Again, those aren't exact numbers, but there was a range somewhere in there. So and the tools were messing up in those depths, somewhere in there. So we knew the hole was probably somewhere around there.

Q Okay. And walk us through your assessment to make a change or not a change. You did generally talk about that, but maybe a little more just detail about the conversations you had with SoCalGas internal as a team to what your approach would be right there to make more kill attempts.

WITNESS WALZEL: A Right. So if the hole was, say, at 800 foot. You're only losing 800 foot a well so that's not -- you know, as far as mud weight goes, that's probably not a whole lot, you know, change in pressure, you know, for 800 foot of 10-pound mud or whatever.

So we were already -- from what I recall, we were already overbalanced. You know, the mud was sufficient. So it wouldn't have really changed a bunch in the next step.

Q Was there any point which you looked at the well and the crater and the fluids coming out and assessed there may be some critical point which the well would

reach a state where you literally could not even get there and understanding the top was probably about the relief well, but is there a point which you discussed this is a safety threshold we've seen in our experience. SoCalGas is concerned.

Did you have discussion about that, to go forward or not go forward?

WITNESS WALZEL: A I don't recall the exact conversations, but, you know, that was discussed, that -- we do we try again, and it really came down to, you know, if the crater got big enough and the mountain top was lost, and we wouldn't have been able to get to the well to do anything with because even during relief-well operations you want to still monitor blowout well if you can and have access to it. So didn't want to disturb the crater anymore.

Q Were you there when they put the bridge over?

WITNESS WALZEL: A No. It was being built when --

MR. HOLTER: So it was after you guys.

WITNESS WALZEL: A Right.

MR. HOLTER: That's it. No further questions. Appreciate it. Thank you.

MR. GRUEN: Anyone else?

MS. ROSE: Can I ask a question?

MR. GRUEN: Yes.

MS. ROSE: Q Going back to when you first heard about the incident on the phone and then you flew over at that time and you first arrived and you got that packet of information, like the well-bore history, all that stuff.

Did you receive information about any other well-control efforts or well intervention that had been done on SS-25 prior?

WITNESS KOPECKY: A Not to my knowledge. I don't recall.

WITNESS WALZEL: A I don't recall either.

MS. ROSE: Thank you.

MR. GRUEN: Q I have just one other question. After the first well-kill attempt did not work for the first Boots & Coots one, what chances did you think there were of succeeding the next time on the next well-kill attempt?

Did you look at that?

WITNESS WALZEL: A I mean, we didn't put any probability numbers to it.

Q Okay.

WITNESS KOPECKY: A I don't know. To

clarify, I felt confident every time we pumped that we were going to kill the well.

WITNESS WALZEL: A Yeah.

WITNESS KOPECKY: A Unfortunately, we weren't successful with the surface kill.

Q That's fair. I appreciate that.

WITNESS WALZEL: A I know that from the first or second, it laid down and was pretty -- didn't do anything for a little bit, but, you know, for whatever reason fluids went into the reservoir, you know, it came back, you know.

WITNESS KOPECKY: A Could not maintain the hydrostatic head.

MR. GRUEN: Unless anybody else has any questions, we're going to thank you for your time. We appreciate you being here, as well as both counsel. Thank you. And that's all we have for today. Let's go off the record.

(Whereupon, at the hour of 3:10 p.m., the examination under oath then adjourned.)

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BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE

STATE OF CALIFORNIA

CERTIFICATION OF TRANSCRIPT OF PROCEEDING

I, Doris Huaman, Certified Shorthand Reporter No. 10358, 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 August 8, 2018.

I further certify that I have no interest in the events of the matter or the outcome of the proceeding.

EXECUTED this 8th day of August, 2018.

Doris Huaman

Doris Huaman
CSR No. 10538

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 August 8, 2018.

I further certify that I have no interest in the events of the matter or the outcome of the proceeding.

EXECUTED this 8th day of August, 2018.

Andrea L. Ross
CSR No. 7896

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 August 8, 2018.

I further certify that I have no interest in the events of the matter or the outcome of the proceeding.

EXECUTED this 8th day of August, 2018.

SHANNON ROSS
CSR No. 8916