UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CMS CEPCOR, LTD., and CMS CEPCOR AMERICANS, LLC, Petitioners, vs. SANDVIK INTELLECTUAL PROPERTY AB, Patent Owner.	)	
	)	Case No. IPR2024-01380
	)	Patent No. 9,827,568
	)	
	)	Case No. IPR2024-01381
	)	Patent No. 11,014,090
	)	

CONTINUED DEPOSITION OF

DAVID SMITH, VOLUME III

December 3, 2025

(Pages 1 - 87)

REPORTED BY:

COLLEEN P. DOHERTY, CSR 345

Notary Public

JOB No. 7774766

CONTINUED DEPOSITION OF DAVID SMITH was taken on behalf of the Patent Owner, at the offices of Veritext Idaho, located at 1109 Main Street, Suite 220, Boise, Idaho, commencing at 11:01 a.m., on December 3, 2025, before Colleen P. Doherty, Certified Shorthand Reporter and Notary Public within and for the State of Idaho, in the above-entitled matter.

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I N D E X

TESTIMONY OF DAVID SMITH — PAGE

Examination by Mr. Arjomand — 4

E X H I B I T S

DESCRIPTION		PAGE
Exhibit 2021	Copy of E. L. Sanborn, Crusher, Patent 1,402,255, 1/3/1922	29
Exhibit 2022	Copy of US Patent 3,813,047, Torrence, et al, Spider Bearing Assembly for Gyratory Crushers, 5/28/1974	40
	(Referenced from previous depositions)	
Exhibit 1016	Copy of Piepho Patent (8 pages)	60
Exhibit 1049	Copy of Third Declaration of David Smith, 11/25/2025 (80 pages)	7
Exhibit 1050	Copy of Torrence Patent	37
Exhibit 1051	Copy of Third Declaration of David G. Smith, 11/25/2025	7
Exhibit 1053	Copy of Coxhill Patent	57
Exhibit 1056	Copy of Yagi Patent (14 pages)	80

DAVID SMITH,

first duly sworn to tell the truth relating to said cause, testified as follows:

EXAMINATION (Continued):

QUESTIONS BY MR. ARJOMAND:

Q. Good morning.

A. Good morning.

Q. Please state and spell your name for the record.

A. David Smith, D-a-v-i-d, S-m-i-t-h.

Q. Mr. Smith, do you understand that you've taken an oath to tell the truth today?

A. Yes.

Q. Is there any reason that you cannot give complete and accurate testimony today?

A. No.

Q. Aside from these proceedings, I know you've taken depositions before; is that correct?

A. That's correct.

Q. And we've been through two depositions in these proceedings, and I believe you know the ground rules. But I think it would be worthwhile just for me just to repeat them. I'll ask you a question. Mr. Sanks here will make an objection. And then you may answer my question, unless it relates to privilege or

confidential information. Does that make sense to you?

A. It does.

Q. We can take a break whenever you need to, but we can't take a break on a pending question. Do you understand that?

A. Yes.

Q. And during cross-examination, you cannot speak to Mr. Sanks about the subject matter in your testimony. Do you understand that as well?

A. Yes.

Q. Wonderful. So this deposition relates to two IPR proceedings. One is IPR2024-01380, related to the 568 patent. The other proceeding is IPR2024-01381, related to the 090 patent. Does that line up with your recollection of the two proceedings?

A. Now, I don't have the numbers in front of me, but that sounds correct.

Q. Okay. Thank you. The testimony today will be directed to both proceedings, unless my question is specifically directed to one or the other proceeding. Does that make sense to you?

A. Sure.

Q. Mr. Smith, what did you do to prepare for your deposition today?

A. So outside of preparing my reports, I had a

conversation with Mr. Sanks yesterday, and I went back and reread my reports.

Q. And how long was your conversation with Mr. Sanks?

A. I believe it was about half an hour.

Q. Okay. And did you speak with anyone else, besides Mr. Sanks, regarding today's deposition, excluding your family?

A. No.

Q. And you indicated that you reviewed your reports; is that correct?

A. That's correct.

Q. Those would be your third declaration in the two proceedings; is that correct?

A. That's correct.

Q. And how long did you review each declaration?

A. I probably spent about an hour-and-a-half going over the two of them.

Q. Okay. Aside from your two declarations that you reviewed, did you review any other documents in preparation for today's deposition?

A. Not since issuing my reports a few days ago.

MR. ARJOMAND: Okay. So let me place in front of you what has been previously marked as Exhibit 1049, in the 01380 proceeding. This is the third declaration

of David Smith.

And also, let me place in front of you what has been previously marked as Exhibit 1051 in the 01381 proceeding. It's the third declaration of Mr. David Smith.

(Exhibits 1049 and 1051 referenced.)

Q. (BY MR. ARJOMAND) Are Exhibits 1049 and 1051 the reports you reviewed in preparation for today's deposition?

A. They appear to be, yes.

Q. Great. So let me direct you to Exhibit 1049. I would like you to go to the last page of your third declaration, page 76. Is that your signature on the last page, Mr. Smith?

A. It is.

Q. And in preparation for today's deposition, as you reviewed Exhibit 1049, did you notice any errors that you would like to correct today?

A. No, I didn't.

Q. Since you've prepared this declaration on November 24th, 2025, as set forth on page 76 of your third declaration, is there anything that you would like to change with respect to Exhibit 1049?

A. No, I don't think so.

Q. So turning to page 75 and 76 of Exhibit 1049,

you have a conclusion at paragraph 63. Do you see that?

A. I do.

Q. And you conclude that in your opinion, the claims, the challenge claims of the 568 patent would have been obvious to a person of ordinary skill in the art. Do you see that?

A. Yes.

Q. And when you refer to the challenge claims of the 568 patent, are you referring to the claims that were presented by patent owner in its revised motion to amend?

A. Yes.

Q. Okay. And your conclusion that those claims are obvious, is based on your analysis as set forth in Exhibit 1049; right?

A. That's correct.

Q. What I'm trying to get at is, does Exhibit 1049 encapsulate all your thinking as to why the revised motion to amend claims are unpatentable as obvious?

A. I believe so. You know, as you know, this has been going on for quite some time. This is my third declaration. The claims have changed. But I believe everything is set forth in this report.

Q. So the claims did change between your first two declarations and this third declaration, Exhibit

1049; is that correct?

A. So I had a first declaration that addressed the original claims. I had a second declaration that amended, but that addressed amended claims. And then this third declaration that addresses a further amendment to those claims.

Q. Okay. Let me direct you to paragraph 10 of Exhibit 1049. It's on page 3.

A. Okay.

Q. In paragraph 10, of Exhibit 1049, you rely on an effective filing date of August 2nd, 2012; is that correct?

A. Yes.

Q. And your obviousness analysis in Exhibit 1049 -- strike that.

So let me now direct you to paragraph 16.

A. Okay.

Q. Take a second to review paragraph 16.

A. (Witness complying.) Okay.

Q. Your obviousness analysis in Exhibit 1049 was based on the level of skill set forth in paragraph 16; is that correct?

A. That's correct.

Q. If during today's deposition, I were to refer to a person of ordinary skill in the art, or POSITA, as

of the priority date with respect to the 01380 proceeding, you would understand that to be the POSITA, in paragraph 16, of Exhibit 1049, as of 2012; is that correct?

A. That's correct.

Q. Mr. Smith, what did you do to prepare Exhibit 1049?

A. I read through the revised motion to amend, and the changes to the claims. I read through the declaration of Dr. Kytomaa. I've reviewed prior art, and I analyzed the claims in light of the prior art, in light of the knowledge of a person of ordinary skill, and then presented my analysis in this report.

Q. You indicated that you reviewed prior art. Which prior art references did you review in preparing Exhibit 1049?

A. Well, there are a number of them. They are all listed in the report.

Q. As you sit here today, do you recall any prior art references that you reviewed that are not set forth in your report?

A. I've reviewed lots of prior art references that are not in this report. But the ones that I've relied on are in this report.

Q. Do you recall which prior art references you

reviewed for this proceeding, that are not in Exhibit 1049?

A. There are some that are in my other declaration for the 090 patent. But as far as art that I've relied on, it is all listed in the declaration.

Q. As you sit here today, can you name me any references that you can recall that you've reviewed in preparation of Exhibit 1049, but that are not listed in Exhibit 1049?

A. Are you asking for art that I read that I didn't rely on?

Q. That's right.

A. I don't have those off the top of my head, no.

Q. As you sit here today, you can't recall a single reference that you might have looked at, but did not rely upon in preparing Exhibit 1049?

A. I don't know why I would commit those to memory. So, no, I don't. I don't recall.

Q. Okay. Did you review the prosecution history of the 568 patent in preparing Exhibit 1049?

A. I have reviewed it. I did not specifically go back through it again.

Q. Do you recall when you reviewed the prosecution history of the 568 patent?

A. Not specifically.

Q. Well, was it before the preparation of your first declaration in the 01380 proceeding?

A. I did review it at that time, yes.

Q. Do you recall if you've reviewed the prosecution history since then?

A. I have reviewed portions of it. I don't believe I've reviewed the entirety of it.

Q. And do you recall if you reviewed any portions of the prosecution history in preparing Exhibit 1049, that's in front of you?

A. I don't think I looked at that, specifically.

Q. Did you review any dictionary definitions in preparing Exhibit 1049?

A. I don't believe I did. If I did, they are listed in the report, but I don't recall doing that for this declaration.

Q. Did you work with anyone else in preparing Exhibit 1049?

A. I did.

Q. Who did you work with?

A. Jon Marshall.

Q. Anyone else?

A. No.

Q. Did you work with counsel in preparing your report, Exhibit 1049?

A. I reviewed it with counsel.

Q. And how many hours would you say, you spent in preparing Exhibit 1049?

A. I don't recall.

Q. Was it 10 hours?

A. At least.

Q. 20 hours?

A. Probably.

Q. 30 hours?

A. I can't say.

Q. Okay. All right. Let's shift over to Exhibit 1051, in the 01381 proceeding. This is your third declaration in that proceeding. And let me direct you to page 103.

A. Okay.

Q. Is that your signature, Mr. Smith --

A. It is.

Q. -- on page 103? And when you said that you reviewed your report in preparation for today's deposition, did that refer to Exhibit 1051, that's in front of you right now?

A. Yes, Exhibit 1051 is one of the reports that I reviewed in preparation for this deposition.

Q. In reviewing Exhibit 1051 in preparation for today's deposition, did you notice any errors?

A. No, I didn't.

Q. And then since you've prepared your third declaration, Exhibit 1051, as of November 25th, 2025, is there anything that you would like to change with respect to Exhibit 1051?

A. No, not that I'm aware of.

Q. Okay. Now, turning to paragraph 83 of your declaration which is on page 103. You conclude that the challenged claims of the 090 patent would have been obvious to a person of ordinary skill in the art. Do you see that?

A. I do.

Q. And I wanted to ask you with respect to Exhibit 1051, if your -- if this report, Exhibit 1051, encapsulates all your thinking as to why the claims that are set forth in Exhibit 1051 are obvious?

A. I believe so. As we discussed with the previous declaration, this is the third declaration. Each one addressing amendments, or the first one addressing the original claims. The second one addressing the first amendments. And this one addressing the revised amendments. I do believe all of the information and opinions are contained in this declaration for the revised claims, amended claims.

Q. And just to be clear, you also believe that

all the information and opinions are contained in Exhibit 1049 for the revised claims in the 568 patent; is that correct?

A. I believe so. The declarations should, in my opinion, show in detail why each of the amended claims for each of the two patents are invalid.

Q. And when you refer to declarations, you are referring to Exhibit 1049 and Exhibit 1051 in front of you?

A. That's correct.

Q. All right. Now, let me now direct you to paragraph 9 of Exhibit 1051. Would it be fair to say, Mr. Smith, that in preparing Exhibit 1051, you relied on a priority date of November 12th, 2013?

A. That's correct.

Q. Now, do you recall if you used the same priority date in your other declarations in the 01381 proceeding?

A. My recollection is that the priority date for at least one of them is different than it was in previous declarations, but I don't recall which ones, specifically.

Q. Okay. But as you sit here today, you are testifying that the claims are obvious in the 090 patent, based on a November 12th, 2013 priority date; is

that correct?

A. That's the date that I used in my analysis based on the prior art. And I think it would have been obvious even before that, but that's the date that I was told is the priority date for the patents --

Q. Okay.

A. -- or for this patent.

Q. So let me direct you to paragraph 16 of your declaration, in Exhibit 1051. Take a minute to read that paragraph.

A. Okay.

Q. Your obvious analysis in Exhibit 1051, was based on the level of skill as set forth in paragraph 16; is that correct?

A. Yes.

Q. So if I were to refer to a POSITA as in the priority date of the 0381 proceeding, you would understand that to be a POSITA, in paragraph 16, of Exhibit 1051, as of 2013; correct?

A. That's correct.

Q. Mr. Smith, what did you do to prepare Exhibit 1051?

A. So again, I reviewed the revised motion to amend the claims. I reviewed the declaration of Dr. Kytomaa. I reviewed various prior art references

and compared them to the claims, and then presented my analysis in this report.

Q. And in terms of reviewing prior art references, do you recall reviewing any prior art references that are not cited in Exhibit 1051, in preparing Exhibit 1051?

A. Sure. Similar to my preparation for Exhibit 1049, there were a number of prior art references that I reviewed that I didn't rely on for my analysis. But that I could have used, say, but were not relied on for the specific combinations and teachings of the prior art that I've identified in this declaration.

Q. Do you recall what those references were as you sit here today?

A. Not specifically, no.

Q. Did you review the prosecution history of the 090 patent in preparing Exhibit 1051?

A. I have reviewed it in the past. I don't think I went through it, specifically, for this declaration, but I have reviewed it in the past.

Q. Okay. And did you review any dictionary definitions in preparing Exhibit 1051?

A. I don't think that I reviewed any dictionary definitions, or relied on that for this declaration.

Q. And did you work with anyone else in preparing

Exhibit 1051?

A. Yes, again, I worked with Jon Marshall.

Q. Is Jon Marshall someone on your team?

A. He is, yes.

Q. Okay. Is he an attorney?

A. He's not, no. He's a mechanical engineer.

Q. Okay. And did you confer with counsel in preparing Exhibit 1051?

A. I did.

Q. And how long did you spend overall in preparing Exhibit 1051?

A. I don't know, specifically.

Q. Roughly, 20 to 30 hours?

A. Probably.

Q. That would be on top of the 20 to 30 hours that you spent preparing Exhibit 1049, in the 01380 proceeding?

A. I think between Jon and I, that's probably accurate.

Q. Okay.

A. Or at least a good estimate.

Q. All right. Let me now direct you to pages 43 and 45 of Exhibit 1051. Let me know when you are there.

A. You said 43 and 45?

Q. Yes.

A. Okay.

Q. Do you see that those pages are showing Figures 1 and 2 of the 090 patent?

A. So Figure 1 is shown on page 43, and Figure 2 is shown on page 44.

Q. So in both figures on pages 43 and 44, you've annotated the sleeve element in purple. Do you see that?

A. I do.

Q. Do you understand the sleeve to be a coupling structure?

A. A coupling structure?

Q. Yes.

A. I'm not sure I thought of it that way.

Q. Okay. How did you think of it?

A. I've referred to it as a sleeve.

Q. Well, let me ask you. What's your understanding of a sleeve?

A. So in the context of these patents, a sleeve is fit over an end of the shaft. And is intermediate between the shaft and the bearing that the shaft rotates in.

Q. So is the sleeve a wear element, in your opinion, with respect to Figures 1 and 2 of this 090 patent?

A. I think that's reasonable. I believe that's discussed in the patent.

Q. So turning to Figure 2, on page 44, of Exhibit 1051, the sleeve is shown in purple. And the main shaft is shown in yellow. Do you see that?

A. I do.

Q. And there is that interface between the sleeve and the main shaft; is that correct?

A. What do you mean by interface?

Q. Well, how do you understand the sleeve and the main shaft to relate to each other, in Figure 2, of the 090 patent?

A. My understanding is that the sleeve is press fit on the -- or an interference fit on the main shaft.

Q. Okay. And would a POSITA looking at Figure 2 of the 090 patent, understand the relative amount of lateral loading as compared to torque loading at the interface between the sleeve and the shaft?

A. I don't think reading the patent, that the relative amounts of those loads would -- are described in the patent. And a person of ordinary skill in the art, if they were to do a full analysis, could probably determine those. But just looking at it, I don't think you could reasonably quantify those based on the figures.

Q. So sitting as a person of ordinary skill in the art, would you understand that the lateral loading would be less than the torque loading for a gyratory rock crusher?

A. Can you say that one more time?

Q. Yeah, let me say it in a better way. So sitting as a person of ordinary skill in the art, would you understand that the lateral loading would be less than the torque loading at the sleeve shaft interface in a gyratory rock crusher?

A. So that's a difficult question to answer as you've asked it. Because the sleeve goes all the way around the shaft as the rock crusher is working, I would expect that there are instances where a force is applied in a lateral direction that could be quite high on one side, and have no force on the other side.

Q. Uh-huh.

A. And I would imagine that at times, there are torsional loads applied, and those probably vary based on various factors.

Q. But based on your knowledge of gyratory rock crushers, how would you understand the relative amounts to be between the lateral loading, versus the torque loading at this interface between the sleeve and the shaft and the gyratory rock crusher?

A. As I explained, the loads vary from no load to high loads in lateral -- in the lateral direction. And they probably vary -- the torsional loads probably vary as well. Torsional loads are measured in different units than lateral loads. So they're not an apples-to-apples comparison. So I'm not quite sure how to answer your question.

Q. How are lateral loads measured, Mr. Smith?

A. I expect them to be measured in a force unit such as pounds.

Q. And what about a torque load?

A. It would probably be in a torsional unit such as foot pounds.

Q. So let me direct you back to page 43 of Exhibit 1051. There is shown at Figure 1, of the 090 patent. And as we previously discussed, the sleeve is shown in purple. And the shaft is shown in yellow. And then there is an element that is shown in pink. What element is that, Mr. Smith?

A. My recollection, and I don't have the patent in front of me, is that that's the bearing housing.

Q. All right. So what is the role of the bearing housing in a gyratory rock crusher, Mr. Smith?

A. I would say, it is to constrain the motion of the top end of the main shaft.

Q. When you say that it's to constrain the motion of the top end of the shaft, what type of motion is being constrained in a rock -- gyratory rock crusher bearing assembly?

A. So that would be keeping the shaft from moving laterally outside of the bearing housing. It would constrain it, so that it can -- stays in that lateral position.

Q. So given that answer, would you understand that the lateral loading in a gyratory rock crusher with respect to that sleeve shaft interface, would be higher than a torque loading for that interface?

A. So we've previously discussed lateral loading and torque loading, and how it's not an apples-to-apples comparison. And that the loading could be very high on one side, and could be nothing on the other side. So I don't know how to answer that question.

Q. Well, what I'm trying to understand, Mr. Smith, is -- well, strike that.

It seemed from your previous testimony, that you had indicated that the bearing assembly would provide some type of lateral constraint. I'm trying to understand what would be the torsional constraint in a gyratory rock crusher with respect to the bearing assembly?

A. So the torsional constraint is probably dependent on -- I don't know that I would call it a torsional constraint. The torsional loads that are transferred from the bearing, to the sleeve, to the shaft, are going to be dependent on the particular materials that are used for each one. They are going to be dependent on the normal loads for each one. And it will be dependent on, you know, the size of the shaft, because that will affect --

Well, I don't know that it would be dependent on the size of the shaft. I would have to think about that some more. But it's at least dependent on the normal loads, and the friction coefficient, which is based on the materials that are used, which are not described in the patent.

Q. All right. Let's take as a given, Figure 1, in page 43, of Exhibit 1051, and assume that the type of material being crushed is standard. The size of the gyratory rock crusher is standard. What I'm trying to understand from you, is that based on what you are seeing in Figure 1, of the 090 patent, would the lateral load be relatively higher than the torsional load, given what I've assumed to be normal set of operations?

A. So I don't know what you mean, when you say a standard size for the shaft, or standard size for the

rock crusher, or standard materials. I've seen rock crushers that are bigger than a room, or rock crushers that are significantly smaller than that.

You know, the type of material you are crushing, is not what I was talking about when I talked about the materials. That would be the actual material that the shaft is made of, that the bearing is made of, that the sleeves are made of. And those can vary. They are not described in the patent. So I don't know how to answer that question.

Q. So you hold yourself out to be an expert on gyratory rock crushers; is that correct, Mr. Smith?

A. Yes.

Q. And you understand how gyratory rock crushers operate; correct?

A. I understand that there are different varieties and different sizes of rock crushers. I'm familiar with many of them; more familiar with some, and less familiar with others.

Q. Okay. And as you sit here today, you can't tell me whether the relative amount of lateral load of loading would be higher than the torque loading at the shaft sleeve interface in a gyratory rock crusher?

A. So again, the question is not an apples-to-apples comparison. So to say, you know, one

is higher than the other. Is like this apple more appley than this orange? I don't know how to answer your question. There are different units of measurement. You know, is one higher than the other, then one probably has a higher number. But they are different units, measuring different things.

Q. Let me see if I can ask the question in a slightly different way, Mr. Smith. You had previously testified that your understanding in the context of these patents, is that a sleeve is an intermediate between the shaft and the bearing. And that the shaft rotates within the sleeve; is that correct?

A. No, the shaft doesn't rotate in the sleeve. It's an interference fit.

Q. Okay.

A. So they should be stationary relative to one another.

Q. Okay. So can you explain to me, what you meant by the sleeve is an intermediate between the shaft and the bearing?

A. Sure. You have, on the inside, you have the shaft. On the outside of the shaft, you have the sleeve. And then outside of the sleeve, you have the bearing. So the sleeve is in between the shaft and the bearing.

Q. What is the role of the sleeve in that arrangement?

A. I would imagine it has multiple roles. But it at least, as we mentioned before, is a wear component. And it interacts with the bearing assembly, and rotates within the bearing assembly, at least those functions.

Q. What do you mean that it interacts with the bearing assembly?

A. I inspect the bearing contact.

Q. And what do you mean that it rotates within the bearing assembly?

A. That would be as the shaft rotates, the sleeve is -- essentially has an interference fit with the shaft, so they are not intended to rotate relative to each other. But the shaft and the sleeve both rotate within the bearing.

Q. You indicated that the sleeve has other -- strike that.

You indicated that the sleeve has several roles. Are there any other roles that you can think of as you sit here today?

A. And so as described in the 090 patent, you know, there are -- I think there are holes in the sleeve that are used for possibly for dismounting, but -- so there may be other functions of parts of the sleeve, or

of the sleeve, in general.

Q. So let me direct you to Exhibit 1049, that's in front of you. This is your third declaration in the 01380 proceeding. And, specifically, can you go to page 37? Let me know when you are there.

A. Okay.

Q. So on page 37, there is shown at the top, Figure 2, of the 568 patent; is that correct?

A. That's correct.

Q. So taking a look at Figure 2, Mr. Smith, would a POSITA understand that there would be a relative motion between the sleeve that's in purple, and the bearing assembly that's in pink?

A. Yes, I would expect there would be motion between those two components.

Q. And then can you go back one page, to page 36 of Exhibit 1049?

A. Okay.

Q. And that shows at the top, Figure 1, of the 568 patent; is that correct?

A. That's correct.

Q. So taking a look at the main shaft 107, that's shown in yellow, on page 36, of Exhibit 1049. Do you see that?

A. I do.

Q. Would you understand that that main shaft gyrates along, or about an axis, as well as rotating about its own longitudinal axis?

A. As we -- I guess reading the patent, it doesn't specifically talk about that. I expect that that's probably what happens, but it's not specifically discussed in the patent.

Q. I see. But your understanding or -- strike that.

POSITA's understanding on Figure 1, of the 568 patent, would be that there are two rotations associated with the main shaft 107. One is a gyratory motion about an axis, and then a separate rotation about the shaft's own longitudinal axis?

A. I would expect that to be the case.

MR. ARJOMAND: Okay. Let's take a quick five-minute break.

(Recess.)

MR. ARJOMAND: Should we go back on the record?

(Exhibit 1021/"2021" marked.)

Q. (BY MR. ARJOMAND) Mr. Smith, let me place in front of you, a new exhibit. We'll mark this as Exhibit 2021. It's the Sanborn patent.

Mr. Smith, are you familiar with the Sanborn

patent?

A. I might have seen it, but I don't know that I've studied it in great detail.

Q. Do you recall in what capacity, you saw the Sanborn patent?

A. Not specifically.

Q. Do you recall reviewing the Sanborn patent in preparing Exhibit 1049, the 01380 proceeding?

A. I don't specifically recall.

Q. All right. Do you recall reviewing the Sanborn patent in preparing for today's deposition?

A. The figure on the front looks familiar. But I don't know that I've specifically relied on this, or specifically reviewed it.

Q. Do you know if the Sanborn patent was considered in the prosecution of the 568 patent?

A. Off the top of my head, I don't know. If you have a copy of the patent, we can look.

Q. But as you sit here today, you don't recall one way or the other?

A. I have a pretty good memory, but not that good.

Q. Okay. All right. I want to ask you a few questions about how the Sanborn operates. Would it make sense for you to review the patent for a few minutes,

first?

A. You know, as I've said, I don't think I've specifically reviewed this one. So, you know, I may be able to glean something in a few minutes. But I'm not confident I would have a perfect understanding of how it works.

Q. Well, it's only about three or four columns long before you get to the claims on the second page. Do you want to just take a moment to read the patent, if that would help you?

A. I can take a moment to read it. But, typically, when I go through this, it's more than just glancing through it. You have to look at the numbers, and find them on the image, and figure out how it all works. So normally, there is a lot more analysis that goes into understanding a patent, than just reading through it.

So it would probably take quite a bit of analysis before I would be comfortable answering questions about a reference that I'm not terribly familiar with.

Q. Okay. So why don't you take whatever time you need to read the first two pages, because that's the length of the patent. And then I can ask you questions after that.

A. Okay. (Witness complying.) Okay. I've read through the patent.

Q. All right. Let me direct you, Mr. Smith, to Figure 1 of Sanborn sole figure. And do you see element 15, I believe, that's the shaft? The reference number is on the lower left.

A. Okay.

Q. Does shaft 15 in Sanborn rotate?

MR. SANKS: I'm going to object to this question on the grounds that Mr. Smith -- it's supposed to be directed towards our last filing, which includes his exhibits. And he's already testified that Sanborn was not something he considered. It's not included in his exhibits.

Therefore, if you want to ask questions about this, this should be something coming from your expert. I mean, even though it was cited -- it was referenced in both of the patents at issue. It wasn't even cited by the examiner. So to expect him to now be able to spend time here, and try to do an analysis for you to answer questions. I think it's completely outside of scope.

So just to let you know, every time you ask a question about it, I'm going to object to it again, on the same grounds.

MR. ARJOMAND: Okay. Terry, I know that you

will -- you intend to object to the questions relating to Sanborn. I would just say, that under the rules of the Patent Trial and Appeal Board, the speaking objection that you just gave is inappropriate. The only objections that you can make on record, are form, foundation, and privilege.

There is no mechanism in an IPR deposition to provide a lengthy objection like you did. Which I think to some extent, can be viewed as arguably, coaching Mr. Smith. So if you intend to make objections with respect to my questions on Sanborn, I ask you just to make an objection based on the rules as provided in the PTAB guidelines. Does that make sense?

MR. SANKS: Fair enough.

Q. (BY MR. ARJOMAND) You are not directing Mr. Smith to not answer the question; are you?

MR. SANKS: There was nothing in there I directed him or coached him. I would tell you to go ahead and ask your questions.

Q. (BY MR. ARJOMAND) Okay. Go ahead and answer, Mr. Smith.

A. If we would look at the second page, line 63-ish. It says, "the frame, though formed in sections to permit of the assembling or removal of the crusher head and its associated parts on the rigid upstanding

shaft 15." I'm sorry. That just says, it's rigid. That doesn't say, it's stationary or not.

It says, "an upright rigid shaft 15 is securely fixed at its upper and lower ends in arch 14 and in the base 10 respectively." That's on page 1, lines 87 to 91-ish.

Q. So, Mr. Smith, based on the passages that you just read in Sanborn, is it your understanding that shaft 15 of Sanborn rotates?

MR. SANKS: Objection as to form.

THE WITNESS: Again, I've only just read through this. And my very basic understanding would suggest that it doesn't, but I'm not 100 percent sure.

Q. (BY MR. ARJOMAND) Okay. Let me direct you back to the sole figure of Sanborn. At the bottom left, there is a reference to No. 20 that refers to a sleeve. Do you see that?

A. I see the No. 20, and it does call it a sleeve, which is eccentric, at the top of page 2, line 1.

Q. Is it your understanding that sleeve 20 and shaft 15 rotate together?

MR. SANKS: Objection; form.

THE WITNESS: So my basic understanding just on reading this just now, would be that sleeve 20

rotates around the shaft 15.

Q. (BY MR. ARJOMAND) Okay. And now, let me direct you to element 16, in the sole figure of Sanborn. The reference numeral is at the top right. And there is also a reference numeral at the bottom left of to 16?

A. Okay.

Q. Do you see that?

A. I do see that.

Q. Do you know what element 16 is?

A. So the patent on page 1, starting around line 91. "For this purpose it is preferred to taper the ends of shaft 15 and surround them with correspondingly shaped bushings 16." So I would say, that it's a bushing.

Q. Okay. And what is your understanding of what a bushing is?

MR. SANKS: Objection; form.

THE WITNESS: Yeah, I would probably have to dig into this a little more to understand that. Because usually, a bushing has to do with rotation, and I'm not sure how that's being used here.

Q. (BY MR. ARJOMAND) Do you understand that bushing 16 rotates?

MR. SANKS: Objection; form.

THE WITNESS: Like I said, I would have to

study this a little more. Based on my reading that I just did, I can't tell you with any certainty.

Q. (BY MR. ARJOMAND) Does bushing 16 secure the shaft 15 from rotation?

MR. SANKS: Objection; form.

THE WITNESS: Does it secure it from rotation? I don't recall reading anything like that.

Q. (BY MR. ARJOMAND) Does sleeve 20 rotate, Mr. Smith, in Sanborn?

MR. SANKS: Objection; form.

THE WITNESS: On page 2, around line 58, it says, "In operation the rotary movements of the eccentric sleeve 20 imparted to it by the driving shaft 23." So I would say that the sleeve 20 is moving.

Q. So turning back to page 1, lines 91 through 97 of Sanborn. It describes the bushing 16. Do you see that?

MR. SANKS: Objection; form.

THE WITNESS: It does talk about the bushing there.

Q. (BY MR. ARJOMAND) So turning to Figure 1 of Sanborn, what do you understand the bushing 16 is doing in that figure?

MR. SANKS: Objection; form.

THE WITNESS: Like I said before, I don't know

based on my cursory reading. It says that it's there, but I don't know what its purpose is specifically. Maybe if I studied the patent more, I could figure that out. But based on my understanding of it at this point, which is very minimal, I can't tell you for sure.

Q. (BY MR. ARJOMAND) In reviewing the Sanborn patent, does it refresh your recollection if you've ever considered this patent in preparing any of your declarations in these proceedings?

A. I don't --

MR. SANKS: Objection; form.

THE WITNESS: I don't think I've read through this patent before today.

(Exhibit 1050 referenced.)

Q. (BY MR. ARJOMAND) Okay. All right. Let me place in front of you what was previously marked as Exhibit 1050, in the 01380 proceeding. And this is the Torrence patent.

Do you recognize Exhibit 1050, Mr. Smith?

A. I do.

Q. Did you review it in preparing your third declaration, Exhibit 1049 in the 01380 proceeding?

A. I did.

Q. And did you review it -- strike that.

Did you review the Torrence patent in

preparing for your deposition today?

A. I didn't review it after submitting my declarations, no.

Q. Would it be fair to say, that you understand the Torrence patent, Mr. Smith?

A. I've been through it, and have a good understanding of it, I think. I guess we'll see, based on the questions that you ask.

Q. Okay. All right. Let me ask you. Does the Torrence patent include a wear sleeve?

A. Well, the Torrence patent includes replaceable wear sleeve 44.

Q. Does the Torrence patent include a bushing?

A. It includes a bushing 46.

Q. Is bushing 46 in the Torrence patent tapered?

A. I would have to go back through and look to see if the bushing 46 is tapered. The bushing 46 here is analogous to the bearing assembly that we talked about in the other patents, and the patent at issue.

Q. In the 568 patent?

A. Yes.

Q. Okay. But I wanted to know, is it your understanding that the bushing 46 is tapered in the Torrence patent?

A. I would have to go through and look for that.

I don't know one way or the other.

Q. Please, do.

A. Please, do.

MR. SANKS: Do you have column 5?

THE WITNESS: I don't.

MR. ARJOMAND: Hold on. One second.

Q. (BY MR. ARJOMAND) So looking at Exhibit 1050 it seems that on the second to final page, it doesn't fully show columns 5 and 6. I understand from checking the USPTO website, that that's how Exhibit 1050 was submitted. However, we can take a quick break, and I will try to see if I can provide you with a full copy of the Torrence patent that shows columns 5 and 6 on the last page.

A. Okay.

MR. ARJOMAND: Let's go off the record.

(Recess.)

MR. ARJOMAND: Back on the record.

Q. (BY MR. ARJOMAND) So during the break, we were able to obtain a full copy of the Torrence patent, Mr. Smith. In front of you is that full copy. Does it include all the columns of the Torrence patent?

A. It includes columns 1 to 6. It appears to be complete.

Q. Great.

MR. ARJOMAND: Let's, for the record, mark that as Exhibit 2022.

(Exhibit 2022 marked.)

MR. ARJOMAND: And, Ms. Court Reporter, previously, we had marked the Sanborn reference as Exhibit 1021. That should have been marked as Exhibit 2021.

(Exhibit 1021 re-marked as 2021.)

Q. (BY MR. ARJOMAND) So, Mr. Smith, before the break, we were discussing, bushing 46 in the Torrence patent. And I asked you, do you know if bushing 46 is tapered?

A. Just looking through it, I don't see anything that would suggest that that is tapered.

Q. Let me direct you to Figure 2 of Torrence. Does that suggest to you that bushing 46 is tapered?

A. Looking at the figure, there may be a slight taper. But, you know, it doesn't -- I didn't see anything in the specification that would say that. And I can't say, you know, that the figure is drawn to scale, or perfect. But there does seem to be a gap between the sleeve and the bushing on the right-hand side of the sleeve, towards the top.

Q. So as you sit here today, is your understanding that bushing 46 is tapered?

A. It's possible based on Figure 2. But again, I didn't see anything in the specification that would specifically call that out.

Q. So is it that you just don't know?

A. Well, it doesn't seem to be called out in the specification. And, you know, based on the figure, you know, it could be, you know, as long as the figure is, you know, drawn to scale and accurate, but...

Q. I guess what I'm trying to understand is that, you relied on the Torrence patent in Exhibit 1049; is that correct?

A. I did.

Q. And you had testified previously that you reviewed the Torrence patent --

A. I did.

Q. -- in preparing Exhibit 1049?

A. Uh-huh.

Q. So I'm asking a simple question. What is your position on whether bushing 46 is tapered or not, as you sit here today?

A. Whether bushing 46 is tapered or not, doesn't impact my opinions.

Q. Okay. But whether it impacts your opinions or not, I'm trying to ask you, based on your understanding of the Torrence patent, having spent time reviewing it,

and drafting a report that's based on it. Is it your understanding that bushing 46 is tapered or not?

MR. SANKS: Object to form.

THE WITNESS: You know, looking at Figure 2, it could be. But there is nothing in the specification that would specifically call that out that I've seen.

Q. (BY MR. ARJOMAND) So you are not willing to say one way or another at this point, whether bushing 46 is tapered?

A. It's not important to my opinions, and it's not specifically called out in the specification. You know, there might be some slight taper based on the figure. But, you know, that assumes that the figure is accurate and drawn to scale.

Q. Why is bushing 46 not important to your opinion?

A. I said, whether or not it's tapered is not important to my opinion.

Q. Okay. So can you explain that to me?

A. Because I -- there is not a limitation in the 568 patent that requires the bearing that the sleeve rotates in to be tapered.

Q. Okay. Any other reason why you don't think that the taper or not of bushing 46 is unimportant for your analysis?

A. In my analysis, I compared the prior art to the claims. The claims don't talk about a taper on that part of the crusher. They talk about a taper on the shaft and on the sleeve, which is different from the bushing or bearing assembly.

Q. Okay. So let me direct you to column 3 of the Torrence patent.

A. Okay.

Q. Actually, strike that.

Let me direct you to Figure 2 of the Torrence patent. Do you see the reference numeral 46, with a reference line, with the arrow pointing to the bushing?

A. I do.

Q. And do you see that same element being referenced with reference numeral 52?

A. I do.

Q. So now, turning to column 3, at lines 49 through 55, there is a reference to bushing 46 and a bearing sleeve 52. Do you see that?

A. Okay. So the bushing 46, has the components of a radial flange 48, and a bearing sleeve 52.

Q. I would like to understand why the same element in Figure 2, is referred to with two different reference numerals, bushing 46 and bearing sleeve 52 in here?

A. Well, reading this portion that you identified in column 3, includes a bushing 46 having a radial flange 48. And bearing sleeve 52 projects downwardly from flange 48. So it's taking the bushing 46, and identifying two different components of that bushing.

Q. I see. So bushing 46, includes the flange 48 and the bearing sleeve 52. Is that how you understand it?

A. That's how I would understand it.

Q. And what's your understanding -- or strike that.

How would a person of ordinary skill in the art understand the difference between the bearing sleeve 52 and the wear sleeve 44?

A. As the shaft is rotated eccentrically, the sleeve moves -- the sleeve 44 moves within the bushing 46 with the portion 52. And this also, in column 3, does describe bearing sleeve 52 as somewhat hourglass in shape.

Q. So based on that description of that hourglass in shape, do you now understand bushing 46 to have a taper?

A. I would say that that is correct, yeah.

Q. Okay. And what is -- how would a person of ordinary skill in the art understand the purpose of that

hourglass shape of the bearing sleeve 52 to be?

A. I'm sorry. I didn't understand that question.

Q. Let me ask that again. What is the purpose of the hourglass shape of the bearing sleeve 52, in your opinion?

A. In column 3, starting around line 61 or 62, it says -- it's talking about the hourglass shape. It says, "This permits the gyratory action of shaft 18 with sleeve 52 and results in wear sleeve 44 making contact above fulcrum 30 with sleeve 52 on one side thereof while a gap is open between sleeve 44 and sleeve 52 on the other side thereof."

Q. Okay. So what is the purpose of the hourglass-shaped bearing sleeve, in your opinion?

A. So I would say that it constrains the gyratory motion of the shaft and sleeve, allowing it to move in a gyratory motion, but constraining it, so that it doesn't -- so that it stays within that bearing.

Q. So can you explain to me how shaft 18 rotates relative to the bushing 46 in the Torrence patent?

A. So in Torrence, it describes the fulcrum, or the point about which the gyratory motion occurs. And the shaft rotates in a gyratory fashion. And the fulcrum is at, you know, near the bottom portion of the bushing 46. And so the portion of the shaft and sleeve

that extend above that, rotate within the hourglass section of the bushing. So that it -- the surfaces of the sleeve and the bushing are in contact when it's tilted towards that side. And they are -- there is a gap when it's tilted away from the other side.

Q. So based on that description of the operation of the Torrence shaft and bushing, what do you understand the purpose of the hourglass shape of the bearing sleeve to be, Mr. Smith?

A. I would say that the purpose of that is to allow the gyratory motion of the shaft. And provide support for the gyratory motion -- provide support for the top portion of the shaft, while it's going through the gyratory motion.

Q. Mr. Smith, why is element 46 described as a bushing, in your opinion?

A. I would say, because the shaft and sleeve rotate within it.

Q. Now, let me direct you, Mr. Smith, to element 58 and 62 of Torrence. Do you see those?

A. Okay.

Q. What is the role of element 62 and 58 in Torrence?

A. 62 is described as an annual or lubricant collecting groove. 58 is described as a seal.

Q. So do you understand what the roles of 62 and 58 are in Torrence?

A. I would probably have to go back and look. That's not really something I was focused on when putting my report together.

Q. Do you want to take a minute to look?

A. I can do that. (Witness complying.) So the Torrence reference talks about a lubricant reservoir.

Q. Uh-huh.

A. And the lubricant collecting groove, and the seal 58 are towards the bottom of that reservoir, to prevent lubricant, I would assume, from -- I guess, to maintain the lubricant in its desired location.

Q. So let me direct you to Figure 4 of Torrence, Mr. Smith.

A. Okay.

Q. Do you see the reference to shaft 18 and wear sleeve 44?

A. I do.

Q. And do you see the reference to elements 62 and 58?

A. I do.

Q. So can you explain the interface between elements 62 and 58 with respect to the wear sleeve 44 and shaft 18?

A. So they are positioned towards the lower portion of the sleeve, on the outside of the sleeve, and below the sleeve 52 of the bushing 46.

Q. And -- strike that.

Figure 4 shows wear sleeve 44 in contact with elements 58. Do you see that?

A. I do.

Q. Can you explain that contact to me?

A. I'm not sure what you mean.

Q. How is element 58 -- or strike that.

How are elements 58 contacting the wear sleeve in 44, Figure 4?

A. I'm still not sure I understand. They are shown in contact. And you are asking, how they are in contact?

Q. Yeah. What -- can you explain the interface between elements 58 and wear sleeve 44?

A. I would say, that the seals 58 are in contact with wear sleeve 44.

Q. Is the contact a rigid contact?

A. So I don't think it says this specifically, but I would expect that the seals 58 are flexible in nature. So that as the gyratory motion occurs, they maintain contact with the sleeve 44. Those are also positioned very close to the fulcrum, where there is

very little side-to-side variation as the shaft moves in a gyratory fashion. And so because there is very little motion in there, probably flexible, and most likely flexible, then they would maintain contact as it rotates.

MR. ARJOMAND: Okay. Let's take a break.

(Lunch recess.)

Q. (BY MR. ARJOMAND) So before the lunch break, Mr. Smith, we were talking about the Torrence patent. And let me direct you to Figure 2 of that patent.

A. Okay.

Q. So you had testified about the fulcrum point 30. And in Figure 2, it shows two different axes; axis X, Y, and axis W, Z, going through fulcrum 30. Do you see that?

A. I do.

Q. Can you explain to me these two axes?

A. My understanding is that axis X, Y, is the axis about which the gyratory motion occurs. And axis W, Z, is the axis of the shaft around which it rotates.

Q. So earlier in the deposition, we were speaking about in a gyratory rock crusher, the main shaft having two types of rotation. So taking a look at Figure 2 of the Torrence patent, would you say that there are two types of rotation that shaft 18 is experiencing?

A. I would, yes.

Q. And what would be those two types of rotation?

A. As I just said, it experiences gyratory rotation around axis X, Y. And then it rotates around axis W, Z, which is the axis of the shaft.

Q. And before the lunch break, we had spoken about how the bearing sleeve 52 was hourglass in shape. Do you recall that?

A. I do.

Q. Is that hourglass shape for the gyratory rotation around axis X, Y?

A. So it does say that the bearing sleeve 52 is somewhat hourglass in shape. And that this promotes the gyratory action of shaft 18. So, yes, I believe that's correct.

Q. So what would happen in Torrence if bearing sleeve 52 was not hourglass shaped?

A. In what regard?

Q. Would shaft 18, for example, still be able to rotate in a gyratory fashion?

A. What shape is it, if it's not hourglass shape?

Q. Oh, I see where you are going. Let's assume for the purposes of my hypothetical, that bearing sleeve 52 is not tapered at all.

A. Okay.

Q. How would that impact the rotation of shaft 18?

A. Depending on the spacing, I would think that it would likely change the wear point. You would probably get more wear on the sleeve in the bushing faster if it were not hourglass shaped.

Q. And would it impact the flow of lubricant in Torrence if bearing sleeve 52 was not tapered in Torrence?

A. It might. I mean, you would probably have to adjust the seals as well, so that they continue to seal and keep the lubricant where it's supposed to be.

Q. Why would you need to adjust the seals?

A. I would expect that there would be more clearance to allow the gyratory motion to occur.

Q. I'm not sure I follow.

A. So there would probably be more clearance towards the bottom of the bushing 46, between the bushing and the wear sleeve 44, to allow the gyratory motion. And so you would have to adjust the seals to maintain the fluid reservoir.

Q. How would you adjust the seals to maintain the fluid reservoir?

A. I think that's something that could easily be done, depending on the actual shape and size of the

bushing and the wear sleeve, and the clearance that is needed.

Q. But what would you do, specifically, Mr. Smith?

A. To redesign this whole thing?

Q. Yes.

A. I don't know. I haven't really thought about that.

Q. Okay. Fair enough. So going back to the hourglass shape of bearing sleeve 52, how do you understand that shape to vary from the top of bearing sleeve 52, at the top of Figure 2, to the end of bearing sleeve 52, at the bottom of Figure 52 -- or Figure 2?

A. If we look at column 3, starting at around line 55. "The space enclosed by the inner periphery of the bearing sleeve 52 is hourglass in shape. That is (see Figure 2) the diameter of the space within the sleeve 52 is a minimum in a transverse plane normal to the fulcrum point 30, and the diameter becomes progressively slightly larger in both axial directions from the fulcrum 30."

Q. So looking at Figure 2, can you explain that to me?

A. Yeah. So if we start at the top of the bushing 46, if we're looking at a cross-sectional

diameter of that bushing, the diameter gradually decreases from the top, to the line where the fulcrum 30 is located. And then below the line where the fulcrum 30 is located, the diameter of the cross-section will start to increase again. That's how you get the hourglass. The diameter is shrinking to a middle, and expanding again below that.

Q. So if you were taking a look at bearing sleeve 52, in Figure 2, is the diameter of the bearing sleeve, where the reference No. 52 is shown, larger than the diameter of the bearing sleeve where 46 is shown?

A. So the internal diameter where -- at the height where 52 is on the right-hand side, would be smaller than the diameter of the internal surface where 46 is. Because both of those are above fulcrum 30. And so the diameter is going to increase as you go up from there. So from the line where the fulcrum 30 is, you first reach 52, and then you reach 46. And so the diameter is increasing as you go up.

Q. But isn't Figure 50 -- excuse me -- isn't Figure 2 showing the bearing sleeve getting thinner as you go from the point associated with reference numeral 52 towards, for example, reference numeral 66?

A. So are we talking about the thickness of the sleeve, or the dimension of the diameter of the internal

surface? Because those are two different things. I thought we were talking about the diameter of the internal surface.

Q. I see. I see. So can you explain the relationship again, between both the diameter of the internal surface, and the thickness of the sleeve, as the sleeve progresses from -- the bearing sleeve progresses from top to bottom?

A. Sure. And again, this is different from the sleeve that's on the shaft.

Q. Right.

A. But this bushing if we start at the horizontal line that contains the point that 30 is indicating. As we move up from that line, the internal diameter of that bushing 46 will increase in dimension as you go up. And it will -- the wall thickness of that bushing will correspondingly decrease, at least until you get to the flange portion at the top.

Q. Okay. And then can you explain the relationship of the internal diameter and the thickness of the bearing sleeve 52 below fulcrum point 32?

A. Sure. So below the horizontal line that contains the point 30, the fulcrum point. The specification says that the diameter, the internal diameter increases as you move down from that line as

well. This is how you get the hourglass shape, right. The line where fulcrum 30 is, that is the narrowest point of the internal surface of the bushing.

And then as we move away from that line, either up or down, the diameter gets bigger progressively. And because the outside surface of the bushing appears to be flat, the wall thickness would decrease as you move away from that line, at least until you get to the flange portion, near the top.

Q. Okay. Let me direct you to Figure 1 of Torrence. So do you see element 42 in Figure 1? It's at the top left.

A. I do.

Q. And do you know what that element is, Mr. Smith?

A. 42 is described as a hub.

Q. So if you go back to Figure 2, it's also shown, specifically, hub 42, at the middle left. Do you see that?

A. The number indicating the hub?

Q. Yes.

A. Yes, I see that.

Q. All right. So what is your understanding of the role of the hub in Torrence?

A. I guess I'm not sure I understand the

question. What is the function of it?

Q. Yes.

A. It is a structural component that holds the bushing 46, and inside of which, the shaft rotates.

Q. Does it house any other elements, Mr. Smith? Specifically, does hub 42 house any elements?

A. I would say, that there are other elements within the hub 42, yes.

Q. What are those other elements?

A. They are indicated in the figure. But you have the seals that we talked about. You have the fluid reservoir. You have vent tubes. And possibly, other components as well.

Q. In your review of gyratory rock crusher patents for this proceeding, do you know of any other reference that has a similar hub design that's set forth in Torrence?

A. That's not something I've specifically looked for.

Q. But as you sit here today, do you recall any other gyratory rock crusher patent having the hub design similar to Torrence?

A. Again, that's not something I looked for. So there could be, but I don't have a specific recollection.

(Exhibit 1053 referenced.)

Q. (BY MR. ARJOMAND) All right. Let me place in front of you what has been previously marked as Exhibit 1053 in the 01381 proceeding. This is the Coxhill 800 patent.

Are you familiar with this patent, Mr. Smith?

A. I am.

Q. Did you review Coxhill 800 in preparing your third declaration, Exhibit 1051, in the 01381 proceeding?

A. I did.

Q. And did you review the Coxhill 800 patent in preparation for today's deposition?

A. I haven't gone through it since submitting my report a few days ago.

Q. Do you believe you have a good understanding of Coxhill 800?

A. At least the portions I relied on for my report. I have certainly gone through it.

Q. Okay. Let me direct you to Figure 1 of Coxhill 800.

A. Okay.

Q. In the middle of Figure 1, there is a shaft 33. Do you see that?

A. I do.

Q. And in the upper portion of the shaft, there is a sleeve 36. Do you see that?

A. There is a sleeve 36 on the shaft, yes.

Q. Can you please describe the shape of the inner surface of the sleeve 36, beginning to the top of the sleeve to its bottom end?

A. So the cross-sectional shape of the inner surface is a circle. And the diameter of that circle is constant from the top from moving down, to a point, saying, the lower probably fourth wear that diameter of the cross-sectional shape starts to increase. Another way of saying that, is that it would have a flat wall from the top, moving downward. And then towards the bottom, that wall flares or tapers out.

Q. Thank you. And can you please describe the shape of the outer surface of the shaft 33, beginning at its top end, down to the bottom end of the sleeve 36?

A. So the shaft would have a shape to, of the outside surface of the shaft would have a shape to match the inside surface of the sleeve.

Q. Does Coxhill 800, in Figure 1, show a taper extending from the top end of the shaft 33, or the top end of the sleeve 36?

A. No, it does not. No, that's why I combine this with other references in my analysis.

Q. Okay. Mr. Smith, would you agree that the region -- strike that.

Would you agree the region, the sleeve 36 that is fitted over the shaft 33 in Figure 1, is primarily cylindrical?

A. The outside surface of the shaft is primarily cylindrical, starting from the top, and moving downwards towards the bottom of where the sleeve is on the shaft. It does start to taper outward.

Q. But you would agree, that the majority of the interface between the shaft 33 and sleeve 36 in Coxhill 800, Figure 1, is cylindrical?

A. That's correct.

Q. Okay. Let me have you go back to the Torrence patent, specifically, Figure 2. Can you please describe the shape of the inner surface of the wear sleeve 44, beginning from the top of the sleeve to its bottom end?

A. Sure. Similarly here, the inside surface of the wear sleeve is generally cylindrical. It has a circular cross-section that is the constant from the top, down to the lower part, where it, again, tapers outward.

Q. Okay. And can you please describe the shape of the outer surface of the shaft 18 in Torrence, beginning at its top end, down to the bottom end of the

wear sleeve 44?

A. The shaft is -- has a shape, so that it matches the inside surface of the sleeve.

Q. So now, having taken a look at both Coxhill 800 and Torrence, would you agree that the fit between the sleeve 44 and shaft 18, in Figure 2, of Torrence, is similar to the fit between the sleeve 36 and shaft 33 in Coxhill 800, Figure 1?

A. I think that's a reasonable comparison. They have a very similar shape.

Q. Does Torrence Figure 2 show a taper extending from the top end of the shaft 18, or the top end of the sleeve 44?

A. No, it does not. And again, that's why it has been combined with other pieces of prior art.

Q. Okay. And then would you agree that the majority of the interface between shaft 44, in Torrence, and sleeve 18, in Torrence, is cylindrical?

A. Yes, I would agree that the majority of it is cylindrical.

(Exhibit 1016 referenced.)

Q. (BY MR. ARJOMAND) Let me place in front of you another exhibit. And this has been previously marked in the 1016, in the 01380 proceeding. This is the Piepho patent. It has also been previously marked

in the 01381 proceeding.

Are you familiar with the Piepho patent, Mr. Smith?

A. I would say so.

Q. Okay. And did you review it in preparing your third declaration in both of these proceedings?

A. At least portions of it.

Q. Okay. Do you recall which portions you reviewed?

A. A lot of those are cited in my declarations.

Q. You don't recall reviewing the entirety of Piepho in preparing your declarations in both proceedings?

A. No, I don't believe I sat down and read it from start to finish this time. I have done that previously, but not specifically for putting these declarations together.

Q. Do you recall reviewing the Piepho patent in preparation for today's deposition?

A. Not since submitting my report, my declarations last week.

Q. So can you describe in your own words, how the coal pulverizer in Piepho operates?

A. So described generally in column 1, starting around line 19. It shows, Figure 1 shows a cross

section of a B&W type EL pulverizer generally depicted as numeral 2. These devices are used to crush coal for burning in a furnace or boiler. This type of pulverizer has a stationary top ring 4, one rotating bottom ring 6, and one set of balls 8 that comprise the grinding elements. The pressure required for efficient grinding is obtained from externally adjustable dual purpose springs 10. The bottom ring 6 is driven by the yoke 12 which is attached to a vertical main shaft assembly 14 of the pulverizer. The top ring 4 is held stationary by the dual purpose springs 10. The raw coal is fed into the grinding zone where it mixes with partially ground coal that forms a circulating load. The pulverizing air causes the coal to circulate through the grinding elements where some of it is pulverized in each pass through the row of balls 8. As the coal becomes fine enough to be picked up by the air it is carried to the classifier where coal of a desired fines is separated from the stream entering the classifier and is carried out with the air. The oversized material is returned to the grinding zone."

Q. So thank you, Mr. Smith. That wasn't quite in your own words, but can maybe focus a little bit more on Figure 1, trying to understand exactly how this coal pulverizer works.

So where would the coal come in to the apparatus of Figure 1?

A. My understanding is the coal comes in through the top.

Q. And do you know if the coal at that point has already been crushed?

A. And I would expect that to some point. It has been. It's not one solid block.

Q. Uh-huh.

A. It has to be of a certain size to at least fit, and be able to be acted upon by the pulverizing balls.

Q. Okay. So it's fed into the apparatus of Figure 1. Does it go down through that hopper-shaped portion of Figure 1?

A. That's my understanding.

Q. Okay. And then where is it delivered from that hopper-shaped portion of Figure 1 -- strike that.

After the hopper-shape portion of Figure 1, where does the coal land in Figure 1?

A. So it goes down through the bottom of that hopper, and into a section below that, where it can be crushed and pulverized by the balls that are shown in circles.

Q. So is it -- strike that.

Is the coal below those balls, or above those balls, or in between those balls; do you know?

A. So it says that some of it is pulverized, and each pass through the row of balls. And I will point out, that this Piepho patent is really related to the main shaft, and it discusses a piece of prior art, and it's not in great detail. So there is not a whole lot of information on it in the patent, but there is a little bit, which we read.

Q. Yeah, I understand that. But how would a person of ordinary skill in the art, looking at the Piepho patent, understand what happens to the coal after it exits the hopper and lands near the balls 8?

A. I guess just reading the Piepho patent, there is a lot of ambiguity there. You would probably have to go back and look more specifically at this type of pulverizer that it's talking about to really get a solid understanding of how that piece of prior art works.

Q. So as you sit here today, you are saying that a person of ordinary skill in the art wouldn't know how -- what happens to the coal once it exits the hopper and proceeds towards the balls 8?

A. You know, based on the disclosure of the Piepho reference, there is very little about how that specifically works. So they could, you know, if they

wanted to, go back and, you know, find more information on the particular pulverizer that's referenced here, and shown in Figure 1 as prior art. But the patent says very little about it.

Q. Okay. I want to ask you, as an expert in this field, how do you understand what happens to the coal once it exits the hopper, and goes towards the balls 8?

MR. SANKS: Objection; form.

THE WITNESS: So I'm not terribly familiar with that particular coal pulverizer. I've never seen one in person. I've used this particular reference to talk about the main shaft, and the tapered section of the main shaft. So I don't want to guess, and I don't particularly know. I don't specifically know exactly how it works, because it's not described in great detail in this reference.

Q. (BY MR. ARJOMAND) Okay. All right. Let's direct your attention to the main shaft 14, since you just referenced that in your previous response. How does the main shaft 14 rotate in Piepho Figure 1? Maybe I should ask that question a little differently, because that was a little vague.

Looking at picture Piepho Figure 1, would a POSITA understand that the shaft 14 rotates about its longitudinal axis?

A. I don't think the Piepho referenced one way or the other. And I don't want to speculate as to whether it does or not. It's not something that I've actually looked at.

Q. So how do you understand, Mr. Smith, the rotation of the main shaft 14, in Figure 1, in Piepho?

A. I'm sorry. Can you repeat that?

Q. Sure. How do you understand the main shaft of 14, in Figure 1, Piepho?

A. Like I said, I don't believe it -- the reference discusses the rotation, or whether or not that shaft rotates. It's more talking about the shape of the shaft, and the tapered section, and the benefits of that, and also, a coating that can be put on it.

Q. So as you sit here today, you don't know whether main shaft 14, of Figure 1, of Piepho rotates?

A. I know there are elements of the prior art shown in Figure 1 that rotate. I'm not sure whether or not the main shaft, itself, rotates, or whether other parts rotate around the main shaft.

Q. Mr. Smith, do you know what forces act on the shaft 14 during the operation of the coal pulverizer, in Figure 1, in Piepho?

A. That's not an analysis I've specifically done. I would imagine there are numerous forces that act on

the main shaft during operation. But the reference certainly doesn't talk about that, and that's not an analysis I've done at this point.

Q. All right. Well, let me direct you to yoke 12, Mr. Smith, in Figure 1, in Piepho. How do you understand the operation of yoke 12?

A. It says, the bottom ring 6 is driven by the yoke 12, which is attached to a vertical main shaft assembly 14 of the pulverizer.

Q. So what's your understanding of the operation of yoke 12, in Figure 1, of Piepho, Mr. Smith?

A. I'm sorry. Can you repeat that?

Q. Sure. So what's your understanding of the operation of yoke 12, in Figure 1, of Piepho?

A. Sorry. Can you say that one more time for me?

Q. Sure. What is your understanding of the operation of yoke 12, in Figure 1, of Piepho?

A. Based on the disclosure, I would say, that yoke 12 drives the bottom ring 6.

Q. What does that mean, Mr. Smith?

A. What does that mean? I would say that the yoke 6 -- or sorry -- the yoke causes the bottom ring 6 to rotate.

Q. How does yoke 12 cause the bottom ring 6 to rotate?

A. Now, the reference doesn't specifically disclose that. And again, I haven't done that research to determine that.

Q. Okay. Let me now direct you to yoke bushing 18, Figure 1, of Piepho.

A. Okay.

Q. What is the purpose of yoke bushing 18 in Piepho?

A. So bushing 18 is an interference fit on the upper taper 25 of the shaft.

Q. Are you waiting for a question from me, Mr. Smith, or are you still pondering the remainder of your answer to the previous question?

A. Did I not fully answer the question?

Q. No. The question that I asked is, what is the purpose of yoke bushing 18 in Piepho? You explained that bushing 18 is an interference fit on the upper taper 25 of the shaft. And I'm trying to understand what the purpose of yoke bushing 18 is, not its location.

A. Sure. So the bushing interacts with other components to -- it was part of the structure of the machine and holding things together.

Q. What other components do you mean?

A. Well, again, it's not described in the

reference. But it looks like it interacts with the yoke 12, you know, which it says is attached to the main shaft assembly 14, which is where the bushing is on the shaft.

Q. You said, it looks like it interacts with yoke 12, which it says is attached to the main shaft assembly 14. What is attached to the main shaft assembly 14 in your previous answer, Mr. Smith?

A. Yoke assembly 12.

Q. Okay. So you understand yoke assembly 12 to be attached to the main shaft 14?

A. Yes, that's what it says in column 1, around line 26, 27.

Q. Looking at Figure 1 of Piepho, would you understand that yoke 12 is attached to the main shaft 14 via yoke bushing 18?

A. I would say that that is part of it, yeah. That they are interacting near the top of the shaft.

Q. So would it be fair to say, that yoke 12 -- strike that.

Would it be fair to say that yoke bushing 18 connects yoke 12 to the main shaft 14?

A. I don't know that I would describe it that way. And I don't know that that's what's doing the connecting. I think it is -- it's probably part of it,

but I don't know that that's the only part of it.

Q. What is part of it, Mr. Smith?

A. The bushing and the yoke are part of the connecting it to the shaft. But there is also the nut 36 on top, and the other components that also interact, I would imagine, form that connection.

Q. I see. But you would say that at least in part, yoke bushing 18 connects yoke 12 to the main shaft 14, in Figure 1, of Piepho?

A. All this reference says, is that the yoke 12 and the bottom ring 6 is driven by yoke 12, which is attached to a vertical main shaft assembly 14 of the pulverizer.

Q. Okay. I understand what Piepho says, Mr. Smith. But I'm also looking at Figure 1, of Piepho. And I'm asking what your understanding would be with respect to whether yoke bushing 18 connects yoke 12 to the main shaft 14, at least with itself, and maybe other elements that you've identified?

A. Yeah, it's not clear from Figure 1 exactly how that's done.

Q. How what is done, Mr. Smith?

A. How that connection is made.

Q. Which connection? I apologize. It's just because we're having a transcript here, we have to

be kind of clear exactly what you are referring to, when you talk about connection, or that, or this.

So I'm trying to understand what is the role of yoke bushing 18, in Figure 1, of Piepho?

A. And so the Piepho reference doesn't specifically state what the role is. It talks about how it is put onto the shaft, and why that's better than a non-tapered fit on the shaft. But it doesn't specifically state how that is used in the prior art shown in Figure 1.

Q. So would it be fair to say, as you sit here today, you don't know what the role of yoke bushing 18 is, in Figure 1, in Piepho?

A. I don't know exactly how it's used in the prior art that's referenced in Piepho.

Q. Okay. You said, exactly. So I want to understand, what is it that you do know about how yoke bushing 18 was used in Figure 1 of Piepho?

A. So I've looked at the Piepho reference. I haven't studied the exact pulverizer that's referenced in Figure 1. And so based on the figure, and based on the disclosure of this reference, you know, I can't tell you. I could probably go and study that, and figure it out. But that's not something I've done at this point.

Q. Okay. Looking at Piepho, Figure 1, would a

person of ordinary skill in the art understand that there is relative motion between the yoke bushing 18 and the yoke 12?

A. Just looking at the figure, I don't think -- I don't think you can tell, and it's not described in this reference.

Q. So is your answer to my question, "I don't know," Mr. Smith?

A. Well, you said, can you tell from the figure? And I said, no, you can't tell from the figure.

Q. Well, would a person of ordinary skill in the art, looking at Figure 1 of Piepho, understand that there is relative motion between the yoke bushing 18 and the yoke 12, Mr. Smith?

MR. SANKS: Object; form.

THE WITNESS: I don't think a person of ordinary skill in the art, looking at Figure 1, would know one way or the other, without looking at the specific piece of prior art, that is shown in Figure 1, and described as prior art. It is not actually the invention that is talked about in the Piepho reference. It's where the invention of Piepho is used, or an application for that.

Q. (BY MR. ARJOMAND) Would a person of ordinary skill in the art understand that there is relative

motion between the yoke bushing 18 and the main shaft 14 in Piepho?

A. So Piepho talks about yoke bushing 18 being an interference fit with the tapered portion of the shaft. So you would not expect relative motion between those two components.

Q. How would a person of ordinary skill in the art understand that yoke bushing 18 drives the yoke 12, in Piepho?

A. So it does say, that the present invention provides an intervening material between the shaft end 25 and the mating bore in yoke 18 fitted within the bore of yoke 12 to prevent fretting damage. But I don't know from that, whether it's driving yoke 12, or whether yoke 12 is rotating on the bushing.

Q. So is your answer, that a person of ordinary skill in the art, would not know that the yoke bushing 18 drives the yoke 12, in Piepho?

A. I think you would have to have a better understanding of the particular piece of prior art shown in Figure 1 to understand that.

Q. So you keep referring to the piece of prior art shown in Figure 1. Mr. Smith, do you know of the prior art that's shown in Figure 1?

A. I remember looking at it a while back, but I

don't have a perfect recollection of it.

Q. What do you recall reviewing Mr. Smith?

A. I remember going to the website, and looking at different pulverizers that they have, and locating -- trying to locate the one referenced here. And I believe there were some videos, or the like, on that. But it's been several months.

Q. So were you looking at coal pulverizers that were made by the assignee of the Piepho patent, the Babcock & Wilcox Company?

A. I believe so.

Q. And did you provide, in your earlier reports, what you found with regard to your search of the prior art that's mentioned in Piepho?

A. I would have to go back and look. I don't recall.

Q. So is it your understanding, that the prior art that's mentioned in Piepho is available to a person of ordinary skill in the art?

A. I would imagine that there is at least some information on it.

Q. Okay. So you understand that an obviousness analysis includes the knowledge of a person of ordinary skill in the art; right?

A. It does.

Q. So when I ask you questions about how a person of ordinary skill in the art would understand the operation of the coal pulverizer in Piepho, your testimony that you don't know, it doesn't seem to be -- strike that.

So when I'm asking you questions about what a person of ordinary skill in the art knows when looking at Piepho, it includes that knowledge; correct?

A. It should.

Q. Right. So I'm asking you, how would a person of ordinary skill in the art, for example, understand whether there the yoke bushing 18 drives the yoke 12, in Piepho?

MR. SANKS: Objection; form.

THE WITNESS: So my understanding is that a person of ordinary skill is a hypothetical person that understands or has -- knows all of the prior art. And this is not a specific question that I have addressed in my research. And so I don't have a specific answer for you. If asked, I could probably take time and go find that. But it's not something that I have specifically looked at in this analysis.

Q. (BY MR. ARJOMAND) Okay. Does the yoke bushing 18 transmit torque to yoke 12, in Piepho?

A. Again, I am not sure on that. I would have to

look up exactly how that's used in that prior art.

Q. Okay. Let me see if I can try to encapsulate what we've discussed for the past 30 minutes or so. So I'm just going to ask you a bunch of questions, and you let me know what your answer is to these questions based on what we've discussed.

So the first question. Would a person of ordinary skill in the art, looking at Piepho, know whether main shaft 14 rotates?

A. I believe a person of ordinary skill in the art could figure that out. I haven't done that at this point.

Q. Okay. Would a person of ordinary skill in the art, looking at Piepho, understand whether yoke 12 rotates?

A. So it says, bottom ring 6 is driven by yoke 12. So I would expect that yoke 12 does rotate.

Q. Okay. So would a person of ordinary skill in the art, looking at Piepho, understand whether yoke bushing 18 rotates?

A. Yoke bushing 18 is an interference fit with the shaft 25. And if the shaft is rotating, I would expect the bushing is rotating. If the shaft is not rotating, I would expect the bushing is not rotating. And as I said before, I haven't -- I haven't looked into

that. Although, I expect I could figure that out, if I was asked to.

Q. Well, Mr. Smith, just to be clear, I am asking you; right?

A. Right, you are asking me if I know right now. You're not asking me, to go and do the research, and figure it out.

Q. Yes.

A. Right, and I haven't done the research yet.

Q. Okay. And then would a person of ordinary skill in the art, looking at Piepho, understand whether there is relative motion between the yoke bushing 18 and the yoke 12?

A. So again, that's not a question I've addressed at this point. So I don't have a good answer for you. I expect I could figure it out, but it's not something I've addressed at this point.

Q. Okay. And how would a person of ordinary skill in the art understand the role of main shaft 14, in Piepho -- or strike that.

To a person of ordinary skill in the art, what would be the role of main shaft 14, in Piepho?

A. Are you talking about the prior art reference that's cited in Piepho? Because Piepho is directed to strain relief main shaft assembly. So Piepho is

directed to the main shaft, itself, which is then used in a piece of prior art.

Q. Right, I am speaking about the operation of the main shaft 14, in Piepho. How would a person of ordinary skill in the art understand the operation of main shaft 14, or main shaft 25, in a coal pulverizer, Mr. Smith?

A. So again, the coal pulverizer is a piece of prior art, where this main shaft is implemented. You know, I haven't personally done the research to figure out exactly how that is implemented. I've been more looking at how the bushing is put on the shaft, and how that interacts. Which is closely -- and more closely in line with the actual disclosure of the Piepho reference.

Q. And how would a person of ordinary skill in the art understand the operation of yoke 12, in Piepho?

A. Again, there is a yoke 12 that's described as part of a piece of prior art, in Piepho. Again, I haven't studied that prior art, and so I'm not sure how to answer your question.

Q. Okay. And how would a person of ordinary skill in the art, understand yoke bushing 18, in Piepho?

A. So Piepho talks about yoke bushing 18 being an interference fits on the upper taper 25 of the main shaft. It talks about how it can be a non-tapered

portion, or a tapered portion, but that tapered is preferable. It talks about a ceramic coating. But the bushing 18 is an interference fit on the main shaft.

Q. How would a person of ordinary skill in the art understand the operation of yoke bushing 18, in Piepho?

A. They would understand, based on the disclosure of Piepho, that there is a yoke bushing 18 that is an interference fits on the end of the main shaft.

Q. Mr. Smith, you keep explaining what it is. I'm asking you how a person of ordinary skill in the art would understand what it does? So I'm asking you whether --

A. So what --

Q. -- how would a person of ordinary skill in the art -- sorry. How would a person of ordinary skill in the art, understand the operation of yoke bushing 18, if you will?

A. So if you are asking how yoke bushing 18 is implemented in the piece of prior art referenced in Piepho? Again, I haven't undertaken that research at this point. The Piepho reference, itself, talks about how that is an interference fit on the end of the shaft.

MR. ARJOMAND: Okay. Let's take a break.

(Recess.)

MR. ARJOMAND: Back on the record.

Q. (BY MR. ARJOMAND) Mr. Smith, during the break, did you speak with counsel regarding the subject matter of your testimony?

A. No.

(Exhibit 1056 referenced.)

Q. (BY MR. ARJOMAND) Let me place in front of you, what has been previously marked as Exhibit 1056, in the 01381 proceeding. It's the Yagi reference.

Are you familiar with this patent, Mr. Smith?

A. I am.

Q. And did you review it in preparing your third declaration in the 01381 proceeding?

A. I have reviewed it during this case. And I certainly reviewed portions of it during the preparation of my third declaration. But it's probably been a few minutes since I sat down and read it from start to finish.

Q. Okay. And did you review it in preparing for your deposition today?

A. Not specifically, no.

Q. Okay. But you have an understanding of the Yagi reference?

A. I have been through it before, yes.

Q. Okay. Let me direct you to Figure 7. And

just to orient you regarding Figure 7, there is a discussion of it at column 8, starting at line 22. And you might take a minute to review that. And then I'll ask you a few questions about it.

A. (Witness complying.) Okay.

Q. All right. So can you explain Figure 7 to me, Mr. Smith?

A. So Figure 7 is a diagram showing a general configuration of a rotating machine, for which a tapered coupling structure is used. And it shows the driver on one side, which is something that would cause rotation. And the driven equipment to be something that is rotating.

Q. And what is 230?

A. 230 is identified as a coupling structure.

Q. Okay. So in column 8, lines 22 through 38, it talks about a coupling structure 10, 50, and 70. Do you see that?

A. I do.

Q. And if you go to, for example, Figure 5C, it refers to a coupling structure 70 having a tapered shaft 60, and a correspondingly tapered hub. Do you see that?

A. Are you reading from somewhere when you say that, or are you just looking at the figure?

Q. I was just looking at Figure 5C -- strike

that -- Figure 5A, I should say.

A. Okay. Can you say that again, while I'm looking at the right figure?

Q. Sure. So if you want to take a look at column 6 of Yagi, around lines 36 through 40. It talks about a "coupling structure 70 comprises a tapered shaft 60 and the hub 30."

A. Okay.

Q. So would you understand that coupling structure 70 to be an example of what would be the element 230 in Figure 70?

A. I think it could be, yes.

Q. And would you understand in Figure 5A of Yagi, that the tapered shaft and the hub have a tapered fit?

A. Yes, both the shaft, the outside surface of the shaft, and the inside surface of the hub are tapered.

Q. Okay. And so would a person of ordinary skill in the art looking at Figure 7 of Yagi, understand that the tapered fit in Yagi is to be used as part of the coupling structure of 230?

A. It can be, yes.

Q. Okay. And considering, again, the interface, for example, in Figure 5A of Yagi, between the tapered shaft 60 and the correspondingly tapered hub 30, would a

POSITA understand that amount of torque would be more than the amount of lateral loading at that tapered interface?

A. I guess it depends on how it's implemented.

Q. Okay.

A. I don't think it -- I don't recall it talking about comparing the lateral force and the torque force. You know, again, as we talked about at the beginning, those are different units of measurement. But I don't think Yagi talks about how it's compared, and it would really depend on how it's implemented, what the magnitudes of the lateral force and the torque force would be.

MR. ARJOMAND: Okay. All right. Let me take about five minutes to look over my notes. But I think we can wrap this up soon.

(Recess.)

MR. ARJOMAND: Mr. Smith, I don't have any further questions on cross-examination. I pass the witness to you, Terry.

MR. SANKS: No questions.

MR. ARJOMAND: Then we're done. Thank you, Mr. Smith.

(Deposition concluded at 3:50 p.m.)

(Signature requested.)

REPORTER'S CERTIFICATE

I, COLLEEN P. DOHERTY, CSR No. 345, Certified Shorthand Reporter, certify:

That the foregoing proceedings were taken before me at the time and place therein set forth, at which time the witness was put under oath by me;

That the testimony and all objections made were recorded stenographically by me and transcribed by me or under my direction;

That the foregoing is a true and correct record of all testimony given, to the best of my ability;

I further certify that I am not a relative or employee of any attorney or party, nor am I financially interested in the action.

IN WITNESS WHEREOF, I set my hand and seal this 4th day of December, 2025.

COLLEEN P. DOHERTY, CSR 345
Notary Public
1109 West Main Street, Suite 220
Boise, Idaho 83702
My commission expires September 7, 2029.

MR. TERRY M. SANKS

tsanks@firstiniplaw.com

December 4, 2025

RE: CMS Cepcor v. Sandvik Intellectual Property AB

12/3/2025, David Smith (#7774766)

The above-referenced transcript is available for review.

Within the applicable timeframe, the witness should read the testimony to verify its accuracy. If there are any changes, the witness should note those with the reason, on the attached Errata Sheet.

The witness should sign the Acknowledgment of Deponent and Errata and return to the deposing attorney. Copies should be sent to all counsel, and to Veritext at (production-ca@veritext.com).

Return completed errata within 30 days from receipt of testimony.

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CMS Cepcor v. Sandvik Intellectual Property AB

David Smith (#7774766)

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David Smith Date

ACKNOWLEDGEMENT OF DEPONENT

I, David Smith, do hereby declare that I have read the foregoing transcript, I have made any corrections, additions, or changes I deemed necessary as noted above to be appended hereto, and that the same is a true, correct and complete transcript of the testimony given by me.

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David Smith Date

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01381 7:3 13:12 15:17 57:4,9 61:1 80:9,13
0381 16:17
090 5:14 11:4 14:9 15:24 17:17 19:3,24 20:12,16 22:15 24:21 27:22

1

1 1:18 19:3,4 19:24 22:15 24:16,21 28:19 29:10 32:4 34:5,20 35:10 36:15,21 39:23 55:10,11 57:20 57:23 58:21 59:4,12 60:8 61:24,25 62:24 63:2,14,15,18 63:19,20 65:3 65:20,23 66:6 66:9,16,18,23 67:5,11,14,17 68:5 69:12,14 70:9,15,20 71:4,10,13,18 71:21,25 72:12 72:17,19 73:21 73:23,24
1,402,255 3:11
1/3/1922 3:11
10 9:7,10 13:5 34:5 62:8,11 81:17
100 34:13
1016 3:18 60:21,24
1021 29:21 40:6,8
103 13:14,18 14:8
1049 3:19 6:24 7:6,7,11,17,23 7:25 8:15,18 9:1,8,10,15,20 10:3,7,16 11:2 11:8,9,16,20 12:9,13,18,25 13:3 15:2,8 17:8 18:16 28:2,17,23 30:8 37:22 41:10,16
1050 3:21 37:14,17,19 39:7,10
1051 3:22 7:3,6 7:7 13:12,20 13:22,24 14:3 14:5,14,14,16 15:8,12,13 16:9,12,19,22 17:5,6,17,22 18:1,8,11,23 20:4 22:15 24:17 57:9
1053 3:24 57:1 57:4
1056 3:25 80:6 80:8
107 28:22 29:12
11,014,090 1:9
11/25/2025 3:20,23
1109 2:3 84:23
11:01 2:4
12 62:8 67:5,6 67:8,11,14,17 67:19,24 69:2 69:6,9,10,15,20 69:22 70:8,10 70:11,17 72:3 72:14 73:8,13 73:14,15,18 75:12,24 76:14 76:17,17 77:13 78:16,17
12/3/2025 85:5
12th 15:14,25
14 3:25 34:4 62:9 65:18,20 65:24 66:6,9 66:16,22 67:9 69:3,7,7,11,15 69:22 70:9,12 70:18 73:1 76:9 77:19,22 78:4,6
15 32:5,8 34:1 34:3,9,22 35:1 35:12 36:4
157 2:14
16 9:16,18,21 10:3 16:8,14 16:18 35:3,5,9 35:13,23 36:3 36:16,22
18 45:8,19 47:17,25 49:25 50:14,19 51:2 59:24 60:6,12 60:18 68:5,7,9 68:16,17,19 69:16,21 70:8 70:17 71:4,12 71:18 72:2,13 73:1,3,8,12,18 75:12,24 76:20 76:21 77:12 78:22,23 79:3 79:5,8,17,19
19 61:25

2

2 19:3,4,24 20:3,11,15 28:8,10 34:19 36:11 40:15

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Sandvik EX2021 Page 88
CMS Cepcor v. Sandvik IPR2024-01381

41:1 42:4 43:10,23 49:10 49:13,23 52:12 52:13,17,22 53:9,21 55:17 59:15 60:6,11 62:2
20 13:7 18:13 18:15 34:16,18 34:21,25 36:8 36:13,14 87:15
2012 9:11 10:3
2013 15:14,25 16:19
2021 3:10 29:21,24 40:7 40:8
2022 3:12 40:2 40:3
2025 1:17 2:4 7:21 14:3 84:17 85:3
2029 84:25
22 81:2,16
220 2:3 84:23
23 36:14
230 81:14,15 82:11,21
24th 7:21
25 68:10,18 73:12 76:22 78:6,24
25th 14:3
26 69:13
27 69:13
29 3:10
2nd 9:11

3

3 1:17 2:4 9:8 43:6,17 44:2 44:17 45:6 52:14
3,813,047 3:12
30 13:9 18:13 18:15 45:10 49:13,14 52:19 52:21 53:2,4 53:15,17 54:13 54:23 55:2 76:3 82:7,25 85:16
32 54:21
32227 84:20
32789 2:15
33 57:24 58:16 58:22 59:4,11 60:7
345 1:23 84:3 84:21
36 28:16,23 58:2,3,5,17,23 59:3,11 60:7 70:5 82:5
37 3:21 28:5,7
375 2:14
38 81:16
3:50 83:24

4

4 3:4 47:14 48:5,12 62:4 62:10 85:3
40 3:12 82:5
42 55:11,16,18 56:6,8
43 18:22,24 19:4,6 22:14 24:17
44 19:5,6 20:3 38:12 44:14,16 45:9,11 47:18 47:24 48:5,12 48:17,19,24 51:19 59:16 60:1,6,13,17
45 18:23,24
46 38:14,15,17 38:17,23 40:10 40:11,16,25 41:19,21 42:2 42:8,15,24 43:11,18,20,24 44:2,4,6,17,21 45:20,25 46:15 48:3 51:18 52:25 53:11,15 53:18 54:15 56:4
48 43:21 44:3,4 44:6
49 43:17
4th 84:17

5

5 39:4,9,13
5/28/1974 3:15
50 53:20 81:17
52 43:15,19,21 43:24 44:3,7 44:14,17,18 45:1,4,9,10,11 48:3 50:7,12 50:17,24 51:8 52:10,12,13,13 52:16,18 53:9 53:10,13,18,23 54:21
55 43:18 52:15
568 5:13 8:4,9 11:20,24 15:2 28:8,20 29:10 30:16 38:20 42:21
57 3:24
58 36:11 46:20 46:22,25 47:2 47:11,21,24 48:6,10,11,17 48:18,22
5a 82:1,13,24
5c 81:20,25

6

6 39:9,13,23 62:4,8 67:7,19 67:22,22,24 70:11 76:16 82:5

Veritext Legal Solutions
Calendar-CA@veritext.com 866-299-5127
Sandvik EX2021 Page 89
CMS Cepcor v. Sandvik IPR2024-01381

60 3:18 81:22 82:6,25
60th 2:22
61 45:6
62 45:6 46:20 46:22,24 47:1 47:20,24
63 8:1 33:23
66 53:23

7

7 3:19,22 80:25 81:1,6,8 82:19 84:25
70 81:17,21 82:6,10,11
707 2:22
75 7:25
76 7:13,21,25
7774766 1:25 85:5 86:2 87:2

8

8 3:18 62:5,16 64:13,22 65:7 81:2,16
80 3:20,25
800 57:4,8,12 57:17,21 58:21 59:12 60:5,8
83 14:7
83702 84:24
87 1:18 34:6

9

9 15:12
9,827,568 1:6
90017 2:23
91 34:6 35:11 36:15
97 36:15

a

a.m. 2:4
ab 1:9 2:18 85:4 86:1 87:1
ability 84:12
able 31:4 32:19 39:20 50:19 63:11
above 2:7 45:10 46:1 53:15 64:1 85:6 87:7
accuracy 85:9
accurate 4:15 18:19 41:8 42:14
acknowledge... 87:3
acknowledg... 85:12
act 66:21,25
acted 63:11
action 45:8 50:14 84:15
actual 25:6 51:25 78:14
actually 43:9 66:3 72:20
additions 87:6
addressed 9:2,4 75:18 77:14,17
addresses 9:5
addressing 14:19,20,21,22
adjust 51:11,13 51:20,22
adjustable 62:7
affect 24:9
ago 6:22 57:15
agree 59:1,3,10 60:5,16,19
ahead 33:19,20
air 62:13,17,20
al 3:13
allotted 85:19
allow 46:11 51:15,19
allowing 45:16
ambiguity 64:15
amend 8:11,19 10:8 16:24
amended 9:4,4 14:24 15:5
amendment 9:6
amendments 14:19,21,22
americans 1:5
americas 2:11
amount 20:16 25:21 83:1,2
amounts 20:20 21:22
analogous 38:18
analysis 8:14 9:14,20 10:13 16:2,12 17:2,9 20:22 31:15,19 32:20 42:25 43:1 58:25 66:24 67:3 74:23 75:22
analyzed 10:11
angeles 2:23
annotated 19:7
annual 46:24
answer 4:25 21:11 22:7 23:9,17 25:10 26:2 32:20 33:16,20 68:13 68:14 69:8 72:7 73:16 75:19 76:5 77:15 78:20
answering 31:19
apologize 70:24
apparatus 63:2 63:13
appeal 1:2 33:3
appear 7:10
appearances 2:9
appears 39:23 55:7

Veritext Legal Solutions
Calendar-CA@veritext.com 866-299-5127
Sandvik EX2021 Page 90
CMS Cepcor v. Sandvik IPR2024-01381

appended 87:7
apple 26:1
apples 22:6,6 23:14,14 25:25 25:25
appley 26:2
applicable 85:8
application 72:23
applied 21:14 21:19
arch 34:4
arguably 33:9
arjomand 2:20 3:4 4:5 6:23 7:7 29:16,19 29:22 32:25 33:15,20 34:14 35:2,22 36:3,8 36:21 37:6,15 39:6,7,16,18,19 40:1,4,9 42:7 49:6,8 57:2 60:22 65:17 72:24 75:23 79:24 80:1,2,7 83:14,18,22
arrangement 27:2
arrow 43:12
art 8:6 9:25 10:10,11,14,15 10:20,22,25 11:4,10 14:10 16:3,25 17:3,4 17:8,11 20:22 21:2,7 43:1 44:13,25 60:15 64:6,11,18,20 65:3 66:17 71:9,15 72:1 72:12,17,19,20 72:25 73:8,17 73:20,23,24 74:14,18,19,24 75:2,7,11,17 76:1,8,11,14,19 77:11,19,21,23 78:2,5,9,16,18 78:19,22 79:5 79:11,16,17,20 82:19
aside 4:17 6:19
asked 21:12 40:11 68:15 75:20 77:2
asking 11:10 41:18 48:14 70:16 75:6,10 77:3,5,6 79:11 79:12,19
assembling 33:24
assembly 3:14 23:4,21,25 27:5,6,8,11 28:13 38:18 43:5 62:9 67:9 69:3,6,7,9,10 70:12 77:25
assignee 74:9
associated 29:11 33:25 53:22
assume 24:17 47:12 50:22
assumed 24:23
assumes 42:13
attached 62:9 67:8 69:2,6,7 69:11,15 70:12 85:11
attention 65:18
attorney 18:5 84:14 85:13
august 9:11
available 74:18 85:6
avenue 2:14
aware 14:6
axes 49:13,17
axial 52:20
axis 29:2,3,13 29:14 49:13,14 49:18,19,19,20 50:4,5,5,11 65:25

b

b 3:7
b&w 62:1
babcock 74:10
back 6:1 11:22 22:14 28:16 29:19 34:15 36:15 38:16 39:18 47:3 52:9 55:17 59:14 64:16 65:1 73:25 74:15 80:1
balls 62:5,16 63:12,23 64:1 64:2,2,4,13,22 65:7
base 34:5
based 8:14 9:21 15:25 16:3,13 20:24 21:19,21 24:14,20 33:12 34:7 36:1 37:1 37:4 38:7 41:1 41:6,24 42:1 42:12 44:20 46:6 64:23 67:18 71:21,21 76:5 79:7
basic 34:12,24
bearing 3:13 19:21 22:21,22 23:4,6,21,24 24:4 25:7 26:11,20,24,25 27:5,6,8,9,11 27:16 28:13 38:18 42:21 43:5,19,21,24 44:3,7,13,18 45:1,4,14,18 46:9 50:7,12 50:16,23 51:8

Veritext Legal Solutions
Calendar-CA@veritext.com 866-299-5127
Sandvik EX2021 Page 91
CMS Cepcor v. Sandvik IPR2024-01381

52:10,11,12,16 53:8,9,11,21 54:7,21
beginning 58:5 58:16 59:17,25 83:8
behalf 2:2
believe 4:21 6:5 8:20,22 12:7 12:14 14:17,22 14:25 15:4 20:1 32:5 50:14 57:16 61:14 66:10 74:6,11 76:10
benefits 66:13
best 84:12
better 21:6 71:7 73:19
beusse 2:12
bigger 25:2 55:5
bit 31:18 62:23 64:9
block 63:8
blvd 2:22
board 1:2 33:3
boiler 62:3
boise 2:3 84:24
bore 73:12,12
bottom 34:15 35:5 45:24 47:11 51:18 52:13 54:8 58:6,14,17 59:8,17,25 62:4,8 63:21 67:7,19,22,24 70:11 76:16
break 5:3,4 29:17 39:11,19 40:10 49:6,8 50:6 79:24 80:3
bunch 76:4
burning 62:3
bushing 35:14 35:16,20,23 36:3,16,19,22 38:13,14,15,17 38:17,23 40:10 40:11,16,22,25 41:19,21 42:2 42:8,15,24 43:5,12,18,20 43:24 44:2,4,5 44:6,16,21 45:20,25 46:2 46:3,7,16 48:3 51:5,18,19 52:1,25 53:1 54:12,15,16 55:3,7 56:4 68:4,7,9,16,17 68:19,21 69:3 69:16,21 70:3 70:8,17 71:4 71:12,18 72:2 72:13 73:1,3,8 73:15,17 75:12 75:24 76:20,21 76:23,24 77:12 78:12,22,23 79:3,5,8,17,19
bushings 35:13

c

ca 85:15
california 2:23
call 24:2 34:18 41:3 42:6
called 41:5 42:11
capacity 30:4
carried 62:17 62:19
case 1:5,8 29:15 80:14
cause 4:3 67:24 81:11
causes 62:14 67:22
cepcor 1:4,5 2:10,10 85:4 86:1 87:1
ceramic 79:2
certain 63:10
certainly 57:19 67:2 80:15
certainty 36:2
certificate 84:1
certified 2:5 84:3
certify 84:4,13
challenge 8:4,8
challenged 14:9
change 7:23 8:24 14:4 51:4 86:4,7,10,13,16 86:19
changed 8:22
changes 10:9 85:10 87:6
checking 39:9
circle 58:8,8
circles 63:24
circular 59:20
circulate 62:14
circulating 62:13
cited 17:5 32:17,18 61:10 77:24
claims 8:4,4,8,9 8:13,19,22,24 9:3,4,6 10:9,11 14:9,15,20,24 14:24 15:2,5 15:24 16:24 17:1 31:8 43:2 43:2
classifier 62:18 62:19
clear 14:25 70:20 71:1 77:3
clearance 51:15,17 52:1

Veritext Legal Solutions
Calendar-CA@veritext.com 866-299-5127
Sandvik EX2021 Page 92
CMS Cepcor v. Sandvik IPR2024-01381

close 48:25
closely 78:13 78:13
cms 1:4,4 2:10 2:10 85:4 86:1 87:1
coached 33:18
coaching 33:9
coal 61:23 62:2 62:11,13,14,16 62:18,24 63:1 63:3,5,20 64:1 64:12,21 65:6 65:10 66:22 74:8 75:3 78:6 78:8
coating 66:14 79:2
coefficient 24:13
collecting 46:25 47:10
colleen 1:23 2:5 84:3,21
column 39:4 43:6,17 44:2 44:17 45:6 52:14 61:24 69:12 81:2,16 82:4
columns 31:7 39:9,13,22,23
combinations 17:11
combine 58:24
combined 60:15
come 63:1
comes 63:3
comfortable 31:19
coming 32:16
commencing 2:4
commission 84:25
commit 11:17
company 74:10
compared 17:1 20:17 43:1 83:10
comparing 83:7
comparison 22:6 23:15 25:25 60:9
complete 4:15 39:24 87:8
completed 85:16
completely 32:21
complying 9:19 32:1 47:7 81:5
component 27:4 56:3
components 28:15 43:20 44:5 56:13 68:22,24 70:5 73:6
comprise 62:5
comprises 82:6
conclude 8:3 14:8
concluded 83:24
conclusion 8:1 8:13
confer 18:7
confident 31:5
confidential 5:1
configuration 81:9
connecting 69:25 70:4
connection 70:6,23,24 71:2
connects 69:22 70:8,17
considered 30:16 32:13 37:8
considering 82:23
constant 58:9 59:20
constrain 22:24 23:1,7
constrained 23:3
constraining 45:17
constrains 45:15
constraint 23:22,23 24:1 24:3
contact 27:9 45:9 46:3 48:5 48:8,14,15,18 48:20,20,24 49:4
contacting 48:11
contained 14:23 15:1
contains 54:13 54:23
context 19:19 26:9
continue 51:11
continued 1:15 2:1 4:4
conversation 6:1,3
copies 85:14
copy 3:10,12,18 3:19,21,22,24 3:25 30:18 39:12,20,21
correct 4:18,19 5:17 6:11,12 6:14,15 7:18 8:16 9:1,12,22 9:23 10:4,5

15:3,10,15 16:1,14,19,20 20:8 25:12,15 26:12 28:8,9 28:20,21 41:11 44:23 50:15 59:13 75:8 84:11 87:8
corrections 87:6
correspondin... 35:12 54:17 81:22 82:25
counsel 12:24 13:1 18:7 80:3 85:14
coupling 19:10 19:12 81:10,15 81:17,21 82:6 82:9,21
court 40:4
coxhill 3:24 57:4,8,12,17,21 58:21 59:11 60:4,8
cross 5:7 52:25 53:4 58:7,11 59:20 61:25 83:19
crush 62:2
crushed 24:18 63:6,23
crusher 3:10 21:4,10,13,25 22:23 23:3,10 23:24 24:19 25:1,23 33:24 43:3 49:22 56:14,21
crushers 3:14 21:22 25:2,2 25:12,14,17
crushing 25:5
csr 1:23 84:3 84:21
cursory 37:1
cylindrical 59:5,7,12,19 60:18,20

d

d 3:1 4:10,10
damage 73:13
date 9:11 10:1 15:14,17,19,25 16:2,4,5,17 86:24 87:12
david 1:16 2:1 3:3,20,23 4:1 4:10 7:1,4 85:5 86:2,24 87:2,4 87:12
day 84:17 87:15
days 6:22 57:15 85:16
december 1:17 2:4 84:17 85:3
declaration 3:19,22 6:13 6:16,25 7:4,13 7:20,22 8:22 8:25 9:2,3,5 10:10 11:4,5 12:2,16 13:13 14:3,8,18,18,24 16:9,24 17:12 17:19,24 28:3 37:22 57:9 61:6 80:13,16
declarations 6:19 8:25 15:4 15:7,17,21 37:9 38:3 61:10,12,17,21
declare 87:4
decrease 54:17 55:8
decreases 53:2
deemed 87:6
definitions 12:12 17:22,24
delivered 63:17
depend 83:11
dependent 24:2 24:5,7,8,10,12
depending 51:3 51:25
depends 83:4
depicted 62:1
deponent 85:13 87:3
deposing 85:13
deposition 1:15 2:1 5:11,24 6:7 6:21 7:9,16 9:24 13:20,23 13:25 30:11 33:7 38:1 49:21 57:13 61:19 80:20 83:24
depositions 3:17 4:18,20
describe 44:18 58:4,15 59:15 59:23 61:22 69:23
described 20:20 24:15 25:9 27:22 46:15,24,25 55:16 61:24 65:15 68:25 72:5,20 78:17
describes 36:16 45:21
description 3:8 44:20 46:6
design 56:16,21
desired 47:13 62:18
detail 15:5 30:3 64:7 65:15
determine 20:23 68:3
devices 62:2
diagram 81:8
diameter 52:17 52:19 53:1,1,4 53:6,9,11,12,14

Veritext Legal Solutions
Calendar-CA@veritext.com 866-299-5127
Sandvik EX2021 Page 94
CMS Cepcor v. Sandvik IPR2024-01381

53:16,19,25 54:2,5,14,20,24 54:25 55:5 58:8,10
dictionary 12:12 17:21,23
difference 44:13
different 15:20 22:4 25:16,17 26:3,6,6,8 43:4 43:23 44:5 49:13 54:1,9 74:4 83:9
differently 65:21
difficult 21:11
dig 35:19
dimension 53:25 54:15
direct 7:11 9:7 9:16 13:13 15:11 16:8 18:22 22:14 28:2 32:3 34:14 35:3 40:15 43:6,10 46:19 47:14 49:10 55:10 57:20 65:18 67:4 68:4 80:25
directed 5:19 5:20 32:11 33:18 77:24 78:1
directing 33:15
direction 21:15 22:2 84:10
directions 52:20
disclose 68:2
disclosure 64:23 67:18 71:22 78:14 79:7
discussed 14:17 20:2 22:16 23:13 29:7 76:3,6
discusses 64:6 66:11
discussing 40:10
discussion 81:2
dismounting 27:24
documents 6:20
doherty 1:23 2:5 84:3,21
doing 12:15 36:22 69:24
downward 58:13
downwardly 44:3
downwards 59:7
dr 10:10 16:25
drafting 42:1
drawn 40:20 41:8 42:14
driven 62:8 67:7 70:11 76:16 81:12
driver 81:10
drives 67:19 73:8,18 75:12
driving 36:13 73:14
dual 62:7,11
duly 4:2

e

e 2:14 3:1,7,10 86:3,3,3
earlier 49:21 74:12
easily 51:24
eccentric 34:19 36:13
eccentrically 44:15
effective 9:11
efficient 62:6
either 55:5
el 62:1
element 19:7 19:23 22:18,19 32:4 35:3,9 43:14,23 46:15 46:19,22 48:10 55:11,14 82:11
elements 47:20 47:24 48:6,11 48:17 56:5,6,7 56:9 62:6,15 66:17 70:19
employee 84:14
encapsulate 8:18 76:2
encapsulates 14:15
enclosed 52:15
ends 34:4 35:11
engineer 18:6
england 2:14
entering 62:19
entirety 12:7 61:11
entitled 2:7
equipment 81:12
errata 85:11,13 85:16
errors 7:17 13:25
essentially 27:13
estimate 18:21
et 3:13
exact 71:20
exactly 62:24 65:14 70:20 71:1,14,16 76:1 78:11
examination 3:4 4:4 5:7

83:19
examiner 32:19
example 50:19 53:23 75:11 81:20 82:10,24
excluding 6:8
excuse 53:20
exhibit 3:10,12 3:18,19,21,22 3:24,25 6:24 7:3,11,17,23,25 8:15,17,25 9:8 9:10,14,20 10:3,6,16 11:1 11:8,9,16,20 12:9,13,18,25 13:3,11,20,22 13:24 14:3,5 14:14,14,16 15:2,8,8,12,13 16:9,12,19,21 17:5,6,7,17,22 18:1,8,11,16,23 20:3 22:15 24:17 28:2,17 28:23 29:21,23 29:23 30:8 37:14,17,19,22 39:7,10 40:2,3 40:6,6,8 41:10 41:16 57:1,3,9 60:21,23 80:6 80:8
exhibits 7:6,7 32:12,14
exits 64:13,21 65:7
expanding 53:7
expect 21:14 22:9 28:14 29:5,15 32:19 48:22 51:14 63:7 73:5 76:17,23,24 77:1,16
experiences 50:3
experiencing 49:25
expert 25:11 32:16 65:5
expires 84:25
explain 26:18 42:19 45:19 47:23 48:8,16 49:17 52:22 54:4,19 81:6
explained 22:1 68:16
explaining 79:10
extend 46:1
extending 58:22 60:11
extent 33:9
externally 62:7

f

factors 21:20
fails 85:18
fair 15:12 33:14 38:4 52:9 69:19,21 71:11
familiar 25:18 25:18,19 29:25 30:12 31:21 57:6 61:2 65:9 80:10
family 6:8
far 11:4
fashion 45:23 49:2 50:20
faster 51:6
fed 62:11 63:13
field 65:6
figure 19:4,4 20:3,11,15 22:15 24:16,21 28:8,10,19 29:10 30:12 31:14 32:4,4 34:15 35:3 36:21,23 37:3 40:15,17,20 41:1,6,7 42:4 42:13,13 43:10 43:23 47:14 48:5,12 49:10 49:13,23 52:12 52:13,13,17,22 53:9,20,21 55:10,11,17 56:10 57:20,23 58:21 59:4,12 59:15 60:6,8 60:11 61:25 62:24 63:2,14 63:15,18,19,20 65:3,20,23 66:6,9,16,18,23 67:5,11,14,17 68:5 69:14 70:9,15,20 71:4,10,13,18 71:21,21,23,25 72:4,9,10,12,17 72:19 73:21,23 73:24 76:11 77:1,7,16 78:10 80:25 81:1,6,8,20,24 81:25 82:1,3 82:11,13,19,24
figures 19:3,6 19:24 20:25
filing 9:11 32:11
final 39:8
financially 84:14
find 31:14 65:1 75:20
fine 62:16
fines 62:18
finish 61:15 80:18
first 4:2 8:24 9:2 12:2 14:19 14:21 31:1,23

Veritext Legal Solutions
Calendar-CA@veritext.com 866-299-5127
Sandvik EX2021 Page 96
CMS Cepcor v. Sandvik IPR2024-01381

53:18 76:7
firstiniplaw.c... 2:16 85:2
fit 19:20 20:14 20:14 26:14 27:13 60:5,7 63:11 68:9,17 71:8 73:4 76:21 79:3,23 82:14,20
fits 78:24 79:9
fitted 59:4 73:12
five 29:17 83:15
fixed 34:4
flange 43:21 44:3,4,6 54:18 55:9
flares 58:14
flat 55:7 58:12
flexible 48:22 49:3,4
floor 2:22
florida 2:15
flow 51:7
fluid 51:21,23 56:11
focus 62:23
focused 47:4
foerster 2:19
follow 51:16
follows 4:3
foot 22:13
force 21:14,16 22:9 83:7,7,12 83:12
forces 66:21,25
foregoing 84:5 84:11 87:5
form 33:5 34:10,23 35:17 35:24 36:5,10 36:18,24 37:11 42:3 65:8 70:6 72:15 75:14
formed 33:23
forms 62:13
forth 7:21 8:14 8:23 9:21 10:20 14:16 16:13 56:16 84:6
found 74:13
foundation 33:6
four 31:7
fourth 58:10
frame 33:23
fretting 73:13
friction 24:13
front 5:16 6:23 7:2 12:10 13:21 15:8 22:21 28:3 29:23 30:12 37:16 39:21 57:3 60:22 80:7
fulcrum 45:10 45:21,24 48:25 49:12,14 52:19 52:21 53:2,3 53:15,17 54:21 54:23 55:2
full 20:22 39:12 39:20,21
fully 39:9 68:14
function 56:1
functions 27:6 27:25
furnace 62:3
further 9:5 83:19 84:13

g

g 3:23
gap 40:21 45:11 46:5
general 28:1 81:8
generally 59:19 61:24 62:1
getting 53:21
give 4:14
given 23:9 24:16,22 84:12 87:9
glancing 31:13
glean 31:4
go 7:12 11:21 28:4,16 29:19 31:12 33:18,20 38:16,25 39:16 47:3 53:16,19 53:22 54:15 55:17 59:14 63:14 64:16 65:1 71:23 74:15 75:20 77:6 81:20
goes 21:12 31:16 63:21 65:7
going 6:18 8:21 24:5,6 32:9,23 46:13 49:14 50:22 52:9 53:16 74:3 76:4
good 4:6,7 18:21 30:21,22 38:6 57:16 77:15
gradually 53:1
great 7:11 30:3 39:25 64:7 65:15
grinding 62:5,6 62:12,14,21
groove 46:25 47:10
ground 4:21 62:12
grounds 32:10 32:24
guess 29:4 38:7 41:9 47:12 55:25 64:14 65:13 83:4

Veritext Legal Solutions
Calendar-CA@veritext.com 866-299-5127
Sandvik EX2021 Page 97
CMS Cepcor v. Sandvik IPR2024-01381

guidelines 33:13
gyrates 29:2
gyratory 3:14 21:3,10,21,25 22:23 23:3,10 23:24 24:19 25:12,14,23 29:12 45:8,15 45:17,22,23 46:11,12,14 48:23 49:2,19 49:22 50:3,10 50:14,20 51:15 51:19 56:14,21

h

h 3:7 4:10 86:3
half 6:5,17
hand 40:22 53:13 84:16
happen 50:16
happens 29:6 64:12,21 65:6
head 11:13 30:17 33:25
height 53:13
held 62:10
help 31:10
hereto 87:7
high 21:15 22:2 23:15
higher 23:11 24:22 25:22 26:1,4,5
history 11:19 11:24 12:5,9 17:16
hold 25:11 39:6
holding 68:23
holds 56:3
holes 27:23
hopper 63:14 63:18,19,22 64:13,21 65:7
horizontal 54:12,22
hour 6:5,17
hourglass 44:18,20 45:1 45:4,7,14 46:1 46:8 50:7,10 50:13,17,21 51:6 52:10,16 53:6 55:1
hours 13:2,5,7 13:9 18:13,15
house 56:5,6
housing 22:21 22:23 23:6
hub 55:16,18 55:20,24 56:6 56:8,16,21 81:22 82:7,14 82:16,25
huh 21:17 41:17 47:9 63:9
hypothetical 50:23 75:16

i

idaho 2:3,4,6 84:24
identified 17:12 44:1 70:19 81:15
identifying 44:5
iii 1:16
image 31:14
imagine 21:18 27:3 66:25 70:6 74:20
impact 41:22 51:1,7
impacts 41:23
imparted 36:13
implemented 78:9,11 79:20 83:4,11
important 42:10,15,18
inappropriate 33:4
include 38:10 38:13 39:22
included 32:13
includes 32:11 38:11,14 39:23 44:2,6 74:23 75:8
increase 53:5 53:16 54:15 58:11
increases 54:25
increasing 53:19
indicated 6:10 10:14 23:21 27:17,19 56:10
indicating 54:13 55:20
information 5:1 14:23 15:1 64:8 65:1 74:21
inner 52:15 58:4,7 59:16
inside 26:21 56:4 58:20 59:18 60:3 82:16
inspect 27:9
instances 21:14
intellectual 1:8 2:18 85:4 86:1 87:1
intend 33:1,10
intended 27:14
interact 70:5
interacting 69:18
interacts 27:5,7 68:21 69:1,5 78:13
interested 84:15
interface 20:7,9 20:18 21:9,24

Veritext Legal Solutions
Calendar-CA@veritext.com 866-299-5127
Sandvik EX2021 Page 98
CMS Cepcor v. Sandvik IPR2024-01381

23:11,12 25:23 47:23 48:16 59:11 60:17 82:23 83:3
interference 20:14 26:14 27:13 68:9,17 73:4 76:21 78:24 79:3,9 79:23
intermediate 19:20 26:10,19
internal 53:12 53:14,25 54:3 54:6,14,20,24 55:3
intervening 73:11
invalid 15:6
invention 72:21 72:22 73:10
ipr 5:12 33:7
ipr2024-01380 1:5 5:12
ipr2024-01381 1:8 5:13
ish 33:23 34:6
issue 32:18 38:19
issuing 6:22

j

jeffrey 2:21
jeffreyyoung 2:25
job 1:25
jon 12:21 18:2 18:3,18

k

keep 51:12 73:22 79:10
keeping 23:5
kind 71:1
know 4:17,21 8:20,20 11:17 18:12,23 23:17 24:2,8,10,24 25:4,9,25 26:2 26:4 27:23 28:5 30:2,13 30:15,17 31:2 31:3 32:22,25 35:9 36:25 37:2 38:22 39:1 40:11,18 40:20 41:4,6,7 41:7,8 42:4,12 42:13 45:24 52:7 55:14 56:15 63:5 64:2,20,23,25 65:1,14,14 66:15,17,21 69:2,23,24 70:1 71:12,14 71:17,22 72:8 72:18 73:13,17 73:23 75:4 76:5,8 77:5 78:10 83:8
knowledge 10:12 21:21 74:23 75:8
knows 75:7,17
kytomaa 10:10 16:25

l

l 3:10
land 63:20
lands 64:13
larger 52:20 53:10
lateral 20:17 21:2,8,15,23 22:2,2,5,8 23:7 23:10,13,22 24:21 25:21 83:2,7,12
laterally 23:6
left 32:6 34:15 35:5 55:12,18
legal 85:23
length 31:24
lengthy 33:8
level 9:21 16:13
light 10:11,12
likely 49:3 51:4
limitation 42:20
line 5:14 33:22 34:19 35:10 36:11 43:12 45:6 52:15 53:2,3,17 54:13,14,22,25 55:2,4,8 61:25 69:13 78:14 81:2 86:4,7,10 86:13,16,19
lines 34:6 36:15 43:17 81:16 82:5
listed 10:18 11:5,8 12:15
little 35:19 36:1 49:1,2 62:23 64:9,24 65:4 65:21,22
llc 1:5 2:11
llp 2:19
load 22:1,11 24:22,22 25:21 62:13
loading 20:17 20:17 21:2,3,8 21:9,23,24 23:10,12,13,14 23:15 25:22,22 83:2
loads 20:20 21:19 22:1,2,3 22:4,5,8 24:3,7 24:13
locate 74:5
located 2:3 53:3,4
locating 74:5
location 47:13 68:20

Veritext Legal Solutions
Calendar-CA@veritext.com 866-299-5127
Sandvik EX2021 Page 99
CMS Cepcor v. Sandvik IPR2024-01381

long 6:3,16 18:10 31:8 41:7
longitudinal 29:3,14 65:25
look 28:10,22 30:18 31:13 33:22 38:16,25 47:3,6 49:23 52:14 53:8 60:4 64:16 74:15 76:1 82:4 83:15
looked 11:15 12:11 56:18,23 66:4 71:19 75:22 76:25
looking 20:15 20:23 39:7 40:13,17 42:4 52:22,25 64:11 65:23 69:14 70:15 71:25 72:4,12,17,18 73:25 74:3,8 75:7 76:8,14 76:19 77:11 78:12 81:24,25 82:3,19
looks 30:12 69:1,5
los 2:23
lot 31:15 61:10 64:7,15
lots 10:22
lower 32:6 34:4 48:1 58:10 59:21
lubricant 46:24 47:8,10,12,13 51:7,12
lunch 49:7,8 50:6

m

m 2:13 4:10 85:1
machine 68:23 81:9
made 25:7,7,8 70:23 74:9 84:8 87:5
magnitudes 83:12
main 2:3 20:4,8 20:11,14 22:25 28:22 29:1,12 49:22 62:9 64:6 65:12,13 65:18,20 66:6 66:8,16,19,20 67:1,8 69:2,6,7 69:11,15,22 70:8,12,18 73:1 76:9 77:19,22,25 78:1,4,6,6,9,24 79:3,9 84:23
maintain 47:13 48:24 49:4 51:21,22
majority 59:10 60:17,19
make 4:24 5:1 5:21 30:24 33:5,10,12,13
making 45:9
marjomand 2:24
mark 29:23 40:1
marked 6:24 7:3 29:21 37:16 40:3,5,6 40:8 57:3 60:24,25 80:8
marshall 12:21 18:2,3
match 58:19
matches 60:3
material 24:18 25:4,6 62:20 73:11
materials 24:6 24:14 25:1,6
mating 73:12
matter 2:7 5:8 80:4
mean 20:9 24:24 27:7,10 32:17 48:9 51:10 67:20,21 68:24
meant 26:19
measured 22:4 22:8,9
measurement 26:4 83:9
measuring 26:6
mechanical 18:6
mechanism 33:7
mehran 2:20
memory 11:18 30:21
mentioned 27:4 74:14,18
middle 53:6 55:18 57:23
minimal 37:5
minimum 52:18
minute 16:9 29:17 47:6 81:3
minutes 30:25 31:4 76:3 80:17 83:15
mixes 62:12
mofo.com 2:24 2:25
moment 31:9 31:11
months 74:7
morning 4:6,7
morrison 2:19
motion 8:10,19 10:8 16:23

22:24 23:1,2 28:12,14 29:12 45:16,17,22 46:11,12,14 48:23 49:3,19 51:15,20 72:2 72:13 73:1,5 77:12
move 45:16 54:14,25 55:4 55:8
movements 36:12
moves 44:16,16 49:1
moving 23:5 36:14 58:9,13 59:7
multiple 27:3

n

n 3:1
name 4:8 11:6
narrowest 55:2
nature 48:23
near 45:24 55:9 64:13 69:18
necessary 87:6
need 5:3 31:23 51:13
needed 52:2
never 65:10
new 2:14 29:23
non 71:8 78:25
normal 24:7,13 24:23 52:18
normally 31:15
notary 1:24 2:6 84:22 87:13,19
note 85:10
noted 87:7
notes 83:15
notice 7:17 13:25
november 7:21 14:3 15:14,25
number 10:17 17:8 26:5 32:5 55:20
numbers 5:16 31:13
numeral 35:4,5 43:11,15 53:22 53:23 62:2
numerals 43:24
numerous 66:25
nut 70:4

o

oath 4:12 84:7
object 32:9,23 33:1 42:3 72:15
objection 4:24 33:4,8,12 34:10,23 35:17 35:24 36:5,10 36:18,24 37:11 65:8 75:14
objections 33:5 33:10 84:8
obtain 39:20
obtained 62:7
obvious 8:5,14 8:19 14:10,16 15:24 16:4,12
obviousness 9:14,20 74:22
occur 51:15
occurs 45:22 48:23 49:19
office 1:1
offices 2:2
oh 50:22
okay 5:18 6:6 6:19,23 8:13 9:7,9,17,19 11:19 13:11,15 14:7 15:23 16:6,11 17:21 18:5,7,20 19:1 19:15 20:15 25:20 26:15,18 28:6,18 29:16 30:23 31:22 32:1,1,7,25 33:20 34:14 35:2,6,15 37:15 38:9,22 39:15 41:23 42:19,23 43:6 43:8,20 44:24 45:13 46:21 47:16 49:6,11 50:25 52:9 54:19 55:10 57:20,22 59:1 59:14,23 60:16 61:5,8 63:13 63:17 65:5,17 68:4,6 69:10 70:14 71:16,25 74:22 75:23 76:2,13,18 77:10,18 78:21 79:24 80:19,22 80:25 81:5,16 82:2,8,18,23 83:5,14
once 64:21 65:7
ones 10:23 15:21
open 45:11
operate 25:15
operates 30:24 61:23
operation 36:12 46:6 66:22 67:1,6 67:10,14,17 75:3 78:3,5,16 79:5,17
operations 24:23
opinion 8:3 15:5 19:24 42:16,18 45:5 45:14 46:16
opinions 14:23 15:1 41:22,23 42:10

Veritext Legal Solutions
Calendar-CA@veritext.com 866-299-5127
Sandvik EX2021 Page 101
CMS Cepcor v. Sandvik IPR2024-01381

orange 26:2
ordinary 8:5 9:25 10:12 14:10 20:21 21:1,7 44:12 44:25 64:11,20 72:1,11,17,24 73:7,16 74:19 74:23 75:2,7 75:11,16 76:8 76:10,13,18 77:10,18,21 78:5,15,21 79:4,11,15,16 82:18
orient 81:1
original 9:3 14:20
outer 58:16 59:24
outside 5:25 23:6 26:22,23 32:21 48:2 55:6 58:19 59:6 82:15
outward 59:9 59:22
overall 18:10
oversized 62:20
own 29:3,14 61:22 62:23
owner 1:10 2:2 2:18 8:10

p

p 1:23 2:5 84:3 84:21
p.m. 83:24
page 3:3,8 7:12 7:13,14,21,25 9:8 13:14,18 14:8 19:4,5 20:3 22:14 24:17 28:4,7 28:16,16,23 31:8 33:22 34:5,19 35:10 36:11,15 39:8 39:14 86:4,7 86:10,13,16,19
pages 1:18 3:18 3:20,25 18:22 19:2,6 31:23
paragraph 8:1 9:7,10,16,18,21 10:3 14:7 15:12 16:8,10 16:13,18
park 2:15
part 43:3 59:21 68:22 69:17,25 70:1,2,3,8 78:18 82:20
partially 62:12
particular 24:5 65:2,10,11 73:20
particularly 65:14
parts 27:25 33:25 66:20
party 84:14
pass 62:15 64:4 83:19
passages 34:7
past 17:18,20 76:3
patent 1:1,2,6,9 1:10 2:2,18 3:11,12,18,21 3:24,25 5:13 5:14 8:4,9,10 11:4,20,24 14:9 15:2,25 16:7 17:17 19:3,25 20:2 20:12,16,19,21 22:16,20 24:15 24:21 25:9 27:22 28:8,20 29:4,7,11,24 30:1,5,7,11,15 30:16,18,25 31:9,16,24 32:2 33:3 35:10 37:3,7,8 37:13,18,25 38:5,10,11,13 38:15,19,20,24 39:13,20,22 40:11 41:10,14 41:25 42:21 43:7,11 45:20 49:9,10,24 56:21 57:5,6 57:12 59:15 60:25 61:2,18 64:5,8,12,14 65:3 74:9 80:10
patents 15:6 16:5 19:19 26:10 32:18 38:19 56:15
pending 5:4
percent 34:13
perfect 31:5 40:21 74:1
periphery 52:15
permit 33:24
permits 45:8
person 8:5 9:25 10:12 14:10 20:21 21:1,7 44:12,24 64:11 64:20 65:11 72:1,11,16,24 73:7,16 74:18 74:23 75:1,7 75:10,16,16 76:7,10,13,18 77:10,18,21 78:4,15,21 79:4,11,15,16 82:18
personally 78:10

Veritext Legal Solutions
Calendar-CA@veritext.com 866-299-5127
Sandvik EX2021 Page 102
CMS Cepcor v. Sandvik IPR2024-01381

petitioner 2:10
petitioners 1:6
picked 62:17
picture 65:23
piece 64:6,18 72:19 73:20,22 78:2,8,18 79:20
pieces 60:15
piepho 3:18 60:25 61:2,12 61:18,23 64:5 64:12,14,24 65:20,23 66:1 66:6,9,16,23 67:5,11,14,17 68:5,8,16 69:14 70:9,14 70:15 71:4,5 71:13,15,18,19 71:25 72:12,21 72:22 73:2,3,9 73:18 74:9,14 74:18 75:3,8 75:13,24 76:8 76:14,19 77:11 77:20,22,24,24 77:25 78:4,14 78:16,18,22,23 79:6,8,21,22
pink 22:18 28:13
place 6:23 7:2 29:22 37:16 57:2 60:22 80:7 84:6
plane 52:18
please 4:8 39:2 39:3 58:4,15 59:15,23
point 37:4 42:8 45:22 49:12 51:4 52:19 53:22 54:13,21 54:23,23 55:3 58:9 63:5,7 64:4 67:3 71:24 76:12 77:15,17 79:22
pointing 43:12
pondering 68:12
portion 44:1,17 45:24,25 46:13 48:2 54:18 55:9 58:1 63:15,18,19 73:4 79:1,1
portions 12:6,8 57:18 61:7,8 80:15
posita 9:25 10:2 16:16,18 20:15 28:11 65:24 83:1
posita's 29:10
position 23:8 41:19
positioned 48:1 48:25
possible 41:1
possibly 27:24 56:12
pounds 22:10 22:13
preferable 79:2
preferred 35:11
preparation 6:21 7:8,16 11:8 12:1 13:19,23,24 17:7 57:13 61:19 80:15
prepare 5:23 10:6 16:21
prepared 7:20 14:2
preparing 5:25 10:15 11:16,20 12:9,13,17,24 13:3 15:13 17:6,17,22,25 18:8,11,16 30:8,11 37:8 37:21 38:1 41:16 57:8 61:5,12 80:12 80:19
present 2:25 73:10
presented 8:10 10:13 17:1
press 20:13
pressure 62:6
pretty 30:21
prevent 47:12 73:13
previous 3:17 14:18 15:21 23:20 65:19 68:13 69:8
previously 6:24 7:3 22:16 23:13 26:8 37:16 40:5 41:13 57:3 60:23,25 61:16 80:8
primarily 59:4 59:6
prior 10:10,11 10:14,15,19,22 10:25 16:3,25 17:3,4,8,11 43:1 60:15 64:6,18 65:3 66:17 71:9,15 72:19,20 73:20 73:22,24 74:13 74:17 75:17 76:1 77:23 78:2,9,18,19 79:20
priority 10:1 15:14,17,19,25 16:5,17
privilege 4:25 33:6

probably 6:17 13:8 18:14,18 20:22 21:19 22:3,3,12 24:1 26:5 29:6 31:18 35:18 47:3 49:3 51:5 51:10,17 58:10 64:15 69:25 71:23 75:20 80:16
proceeding 5:13,20 6:25 7:4 10:2 11:1 12:2 13:12,13 15:18 16:17 18:17 28:4 30:8 37:17,22 56:15 57:4,10 60:24 61:1 80:9,13
proceedings 4:17,21 5:12 5:15,19 6:14 37:9 61:6,13 84:5
proceeds 64:22
production 85:15
progresses 54:7 54:8
progressively 52:20 55:6
projects 44:3
promotes 50:13
property 1:8 2:18 85:4 86:1 87:1
prosecution 11:19,24 12:5 12:9 17:16 30:16
provide 23:22 33:8 39:12 46:11,12 74:12
provided 33:12
provides 73:11
ptab 33:13
public 1:24 2:6 84:22 87:19
pulverized 62:15 63:23 64:3
pulverizer 61:23 62:1,3 62:10,25 64:17 65:2,10 66:22 67:9 70:13 71:20 75:3 78:6,8
pulverizers 74:4,8
pulverizing 62:13 63:11
purple 19:7 20:4 22:17 28:12
purpose 35:11 37:2 44:25 45:3,13 46:8 46:10 62:7,11 68:7,16,19
purposes 50:23
put 66:14 71:7 78:12 84:7
putting 47:5 61:16

q

quantify 20:24
question 4:23 4:25 5:4,19 21:11 22:7 23:17 25:10,24 26:3,7 32:10 32:23 33:16 41:18 45:2 56:1 65:21 68:11,13,14,15 72:7 75:18 76:7 77:14 78:20
questions 4:5 30:24 31:20,24 32:15,21 33:1 33:11,19 38:8 75:1,6 76:4,5 81:4 83:19,21
quick 29:16 39:11
quite 8:21 21:15 22:6 31:18 62:22

r

r 86:3,3
radial 43:21 44:2
raw 62:11
reach 53:18,18
read 10:8,9 11:10 16:9 31:9,11,23 32:1 34:8,11 37:12 61:14 64:9 80:17 85:9 87:5
reading 20:19 29:4 31:16 34:25 36:1,7 37:1 44:1 64:14 81:23
really 47:4 52:7 64:5,17 83:11
reason 4:14 42:23 85:11 86:6,9,12,15,18 86:21
reasonable 20:1 60:9
reasonably 20:24
recall 10:19,25 11:7,14,18,23 12:4,8,15 13:4 15:16,21 17:4 17:13 30:4,7,9 30:10,19 36:7 50:8 56:20

Veritext Legal Solutions
Calendar-CA@veritext.com 866-299-5127
Sandvik EX2021 Page 104
CMS Cepcor v. Sandvik IPR2024-01381

61:8,11,18 74:2,16 83:6
receipt 85:17
recess 29:18 39:17 49:7 79:25 83:17
recognize 37:19
recollection 5:15 15:19 22:20 37:7 56:25 74:1
record 4:9 29:20 33:5 39:16,18 40:1 80:1 84:11
recorded 84:9
redesign 52:5
refer 8:8 9:24 13:20 15:7 16:16
reference 11:15 31:20 32:5 34:16 35:4,5 40:5 43:11,12 43:15,18,24 47:8,17,20 53:10,22,23 56:16 64:24 65:11,16 66:11 67:1 68:1 69:1 70:10 71:5,19 71:22 72:6,21 77:23 78:14 79:22 80:9,23
referenced 3:17 7:6 32:17 37:14 43:15 57:1 60:21 65:2,19 66:1 71:15,20 74:5 79:20 80:6 85:6
references 10:15,20,22,25 11:7 16:25 17:4,5,8,13 58:25
referred 19:16 43:23
referring 8:9 15:8 71:1 73:22
refers 34:16 81:21
refresh 37:7
regard 50:18 74:13
regarding 6:7 80:3 81:1
region 59:2,3
relate 20:11
related 5:12,14 64:5
relates 4:25 5:11
relating 4:2 33:1
relationship 54:5,20
relative 20:16 20:20 21:22 25:21 26:16 27:14 28:11 45:20 72:2,13 72:25 73:5 77:12 84:13
relatively 24:22
relied 10:24 11:5 15:13 17:10,24 30:13 41:10 57:18
relief 77:25
rely 9:10 11:11 11:16 17:9
remainder 68:12
remember 73:25 74:3
remotely 2:25
removal 33:24
repeat 4:23 66:7 67:12
replaceable 38:11
report 8:23 10:13,18,21,23 10:24 12:15,25 13:19 14:14 17:2 42:1 47:5 57:15,19 61:20
reported 1:22
reporter 2:5 40:4 84:4
reporter's 84:1
reports 5:25 6:2,11,22 7:8 13:22 74:12
requested 83:25
required 62:6 87:13
requires 42:21
reread 6:2
research 68:2 75:19 77:6,9 78:10 79:21
reservoir 47:8 47:11 51:21,23 56:12
respect 7:23 10:1 14:5,13 19:24 23:11,24 33:11 47:24 70:17
respectively 34:5
response 65:19
results 45:9
return 85:13,16
returned 62:20
review 6:16,20 9:18 10:15 11:19 12:3,12 17:16,21 30:25 37:21,24,25 38:2 56:14 57:8,12 61:5 80:12,19 81:3

85:7
reviewed 6:10 6:20 7:8,17 10:10,14,20,22 11:1,7,21,23 12:4,6,7,8 13:1 13:19,23 16:23 16:24,25 17:9 17:18,20,23 30:14 31:3 41:14 61:9 80:14,15
reviewing 13:24 17:3,4 30:7,10 37:6 41:25 61:11,18 74:2
revised 8:10,18 10:8 14:22,24 15:2 16:23
right 8:15 11:12 13:11,21 15:11 18:22 22:22 24:16 30:10,23 32:3 35:4 37:15 38:9 40:22 53:13 54:11 55:1,23 57:2 65:17 67:4 74:24 75:10 77:4,5,5,9 78:3 81:6 82:3 83:14
rigid 33:25 34:1,3 48:20
ring 62:4,4,8,10 67:7,19,22,24 70:11 76:16
rock 21:4,10,13 21:21,25 22:23 23:3,3,10,24 24:19 25:1,1,2 25:12,14,17,23 49:22 56:14,21
role 22:22 27:1 46:22 55:24 71:3,6,12 77:19,22
roles 27:3,20 27:20 47:1
room 25:2
rotary 36:12
rotate 26:13 27:14,15 32:8 34:22 36:8 46:1,18 50:20 65:20 66:18,20 67:23,25 76:17
rotated 44:15
rotates 19:21 26:12 27:5,10 27:12 34:9 35:1,23 42:22 45:19,23 49:5 49:20 50:4 56:4 65:24 66:12,16,19 76:9,15,20
rotating 29:2 62:4 73:15 76:22,23,24,24 81:9,13
rotation 29:13 35:20 36:4,6 49:23,25 50:2 50:4,11 51:1 66:6,11 81:11
rotations 29:11
roughly 18:13
row 62:16 64:4
rules 4:22 33:2 33:12

s

s 3:7 4:10 86:3
sanborn 3:10 29:24,25 30:5 30:7,11,15,24 32:4,8,12 33:2 33:11 34:8,9 34:15 35:3 36:9,16,22 37:6 40:5
sandvik 1:8 2:18 85:4 86:1 87:1
sanks 2:12,13 4:24 5:8 6:1,4 6:7 32:9 33:14 33:17 34:10,23 35:17,24 36:5 36:10,18,24 37:11 39:4 42:3 65:8 72:15 75:14 83:21 85:1
sat 61:14 80:17
saw 30:4
saying 58:10,12 64:19
says 33:23 34:1 34:3 36:12 37:1 45:7,8 48:21 54:24 64:3 65:3 67:7 69:2,6,12 70:10,14 76:16
scale 40:21 41:8 42:14
scope 32:21
seal 46:25 47:11 51:11 84:16
seals 48:18,22 51:11,13,20,22 56:11
search 74:13
second 9:3,18 14:20 31:8 33:22 39:6,8
section 46:2 53:4 59:20 62:1 63:22 65:12 66:13
sectional 52:25 58:7,11
sections 33:23
secure 36:3,6

Veritext Legal Solutions
Calendar-CA@veritext.com 866-299-5127
Sandvik EX2021 Page 106
CMS Cepcor v. Sandvik IPR2024-01381

securely 34:4
see 8:1,6 14:11 19:2,7 20:5 26:7 28:24 29:8 32:4 34:17,18 35:7 35:8 36:16 38:7,17 39:12 40:13,18 41:2 43:11,14,19 44:6 46:20 47:17,20 48:6 49:15 50:22 52:17 54:4,4 55:11,19,22 57:24 58:2 70:7 76:2 81:18,22
seeing 24:21
seem 40:21 41:5 75:4
seemed 23:20
seems 39:8
seen 25:1 30:2 42:6 65:10
sense 5:1,21 30:25 33:13
sent 85:14
separate 29:13
separated 62:18
september 84:25
set 7:21 8:14,23 9:21 10:20 14:16 16:13 24:23 56:16 62:5 84:6,16
several 27:19 74:7
shaft 19:20,21 19:21 20:4,8 20:11,14,18 21:9,13,25 22:17,25 23:2 23:5,11 24:5,8 24:11,25 25:7 25:23 26:11,11 26:13,19,22,22 26:24 27:12,14 27:15 28:22 29:1,12 32:5,8 34:1,3,9,22 35:1,12 36:4 36:13 43:4 44:15 45:8,16 45:19,23,25 46:7,11,13,17 47:17,25 49:1 49:20,22,25 50:5,14,19 51:1 54:10 56:4 57:23 58:1,3,16,18,19 58:22 59:4,6,8 59:11,24 60:2 60:6,7,12,17 62:9 64:6 65:12,13,18,20 65:24 66:6,8 66:12,13,16,19 66:20,22 67:1 67:8 68:10,18 69:3,4,6,7,11 69:15,18,22 70:4,8,12,18 71:7,8 73:1,4 73:11 76:9,22 76:22,23 77:19 77:22,25 78:1 78:4,6,6,9,12 78:25 79:3,9 79:23 81:21 82:6,14,15,16 82:25
shaft's 29:13
shape 44:19,21 45:1,4,7 46:8 50:7,10,13,21 50:21 51:25 52:10,11,16 55:1 58:4,7,11 58:16,18,19 59:16,23 60:2 60:10 63:19 66:12
shaped 35:13 45:14 50:17 51:6 63:14,18
sheet 85:11
shift 13:11
shorthand 2:5 84:4
show 15:5 39:9 58:21 60:11
showing 19:2 53:21 81:8
shown 19:4,5 20:4,5 22:15 22:17,17,18 28:7,23 48:14 53:10,11 55:18 63:23 65:3 66:18 71:10 72:19 73:20,23 73:24
shows 28:19 39:13 48:5 49:13 61:25,25 81:10
shrinking 53:6
side 21:16,16 23:16,16 40:23 45:10,12 46:4 46:5 49:1,1 53:13 81:11
sign 85:12
signature 7:13 13:16 83:25 84:20
signed 85:19
significantly 25:3
similar 17:7 56:16,22 60:7 60:10
similarly 59:18
simple 41:18
single 11:15

sit 10:19 11:6 11:14 15:23 17:14 25:20 27:21 30:19 40:24 41:20 56:20 64:19 66:15 71:11
sitting 21:1,7
size 24:8,11,18 24:25,25 51:25 63:10
sizes 25:17
skill 8:5 9:21 9:25 10:12 14:10 16:13 20:21 21:1,7 44:12,25 64:11 64:20 72:1,11 72:17,25 73:7 73:17 74:19,24 75:2,7,11,16 76:8,10,13,18 77:11,19,21 78:5,15,22 79:4,11,15,16 82:18
sleeve 19:7,10 19:16,18,19,23 20:4,7,10,13,18 21:9,12,24 22:16 23:11 24:4 25:23 26:10,12,13,19 26:23,23,24 27:1,12,15,17 27:19,23,25 28:1,12 34:16 34:19,21,25 36:8,13,14 38:10,12 40:22 40:23 42:21 43:4,19,21,24 44:3,7,13,14,16 44:16,18 45:1 45:4,9,9,10,11 45:11,14,16,25 46:3,9,17 47:18,24 48:2 48:2,3,5,11,17 48:19,24 50:7 50:12,17,23 51:5,8,19 52:1 52:10,12,13,16 52:18 53:8,9 53:11,21,25 54:6,7,7,10,21 58:2,3,5,6,17 58:20,23 59:3 59:8,11,16,17 59:19 60:1,3,6 60:7,13,18
sleeves 25:8
slight 40:17 42:12
slightly 26:8 52:20
smaller 25:3 53:14
smith 1:16 2:1 3:3,20,23 4:1 4:10,11 5:23 7:1,5,14 10:6 13:16 15:13 16:21 22:8,19 22:23 23:19 25:12 26:8 28:10 29:22,25 32:3,10 33:10 33:16,21 34:7 36:9 37:19 38:5 39:21 40:9 46:9,15 46:19 47:15 49:9 52:4 55:15 56:5 57:6 59:1 61:3 62:22 66:5,21 67:5,11,20 68:12 69:8 70:2,15,22 72:8,14 73:23 74:2 77:3 78:7 79:10 80:2,10 81:7 83:18,23 85:5 86:2,24 87:2,4,12
sole 32:4 34:15 35:3
solid 63:8 64:17
solutions 85:23
somewhat 44:18 50:13
soon 83:16
sorry 34:1 45:2 66:7 67:12,15 67:22 79:16
sounds 5:17
space 52:15,17
spacing 51:3
speak 5:7 6:6 80:3
speaking 33:3 49:21 78:3
specific 17:11 56:24 72:19 75:18,19
specifically 5:20 11:21,25 12:11 15:22 17:15,19 18:12 28:4 29:5,6 30:6,9,13,14 31:3 37:2 41:3 42:6,11 48:21 52:3 55:18 56:6,18 59:15 61:16 64:16,25 65:14 66:24 68:1 71:6,9 75:21 80:21
specification 40:19 41:2,6 42:5,11 54:24
speculate 66:2
spell 4:8
spend 18:10 32:19

spent 6:17 13:2 18:16 41:25
spider 3:13
spoken 50:6
springs 62:8,11
standard 24:18 24:19,25,25 25:1
start 52:24 53:5 54:12 59:9 61:15 80:17
starting 35:10 45:6 52:14 59:7 61:24 81:2
starts 58:11
state 2:6 4:8 71:6,9
states 1:1
stationary 26:16 34:2 62:4,10
stays 23:7 45:18
stenographic... 84:9
strain 77:25
stream 62:19
street 2:3 84:23
strike 9:15 23:19 27:18 29:8 37:24 43:9 44:10 48:4,10 59:2 63:18,25 69:20 75:5 77:20 81:25
structural 56:3
structure 19:11 19:12 68:22 81:10,15,17,21 82:6,10,21
studied 30:3 37:3 71:20 78:19
study 36:1 71:23
subject 5:8 80:3
submitted 39:11
submitting 38:2 57:14 61:20
subscribed 87:14
suggest 34:13 40:14,16
suite 2:3,14 84:23
support 46:12 46:12
supposed 32:10 51:12
sure 5:22 17:7 19:14 22:6 26:21 34:13 35:21 37:5 48:9,13 51:16 54:9,22 55:25 59:18 66:8,18 67:13,16 68:21 75:25 78:19 82:4
surface 53:14 54:1,3,6 55:3,6 58:5,8,16,19,20 59:6,16,18,24 60:3 82:15,16
surfaces 46:2
surround 35:12
sworn 4:2 87:14

t

t 3:7 4:10 86:3 86:3
take 5:3,4 9:18 16:9 24:16 29:16 31:9,11 31:18,22 39:11 47:6 49:6 75:20 79:24 81:3 82:4 83:14
taken 2:1 4:11 4:18 60:4 84:5
talk 29:5 36:19 43:2,3 65:12 67:2 71:2
talked 25:5 38:18 56:11 72:21 83:8
talking 25:5 45:7 49:9 53:24 54:2 64:17 66:12 77:23 83:6
talks 47:8 71:6 73:3 78:23,25 79:2,22 81:17 82:5 83:10
taper 35:11 40:18 42:12,24 43:2,3 44:22 58:21 59:9 60:11 68:10,18 78:24
tapered 38:15 38:17,23 40:12 40:14,16,25 41:19,21 42:2 42:9,17,22 50:24 51:8 65:12 66:13 71:8 73:4 78:25 79:1,1 81:9,21,22 82:6,14,14,17 82:20,24,25 83:2
tapers 58:14 59:21
teachings 17:11
team 18:3
tell 4:2,12 25:21 33:18 36:2 37:5 71:22 72:5,9 72:10

Veritext Legal Solutions
Calendar-CA@veritext.com 866-299-5127
Sandvik EX2021 Page 109
CMS Cepcor v. Sandvik IPR2024-01381

terms 17:3
terribly 31:20 65:9
terry 2:13 32:25 83:20 85:1
testified 4:3 26:9 32:12 41:13 49:12
testifying 15:24
testimony 3:3 4:15 5:8,18 23:20 75:4 80:4 84:8,12 85:9,17 87:8
thank 5:18 58:15 62:22 83:22
thereof 45:10 45:12
thickness 53:24 54:6,16,20 55:7
thing 52:5
things 26:6 54:1 68:23
think 4:22 7:24 12:11 16:3 17:18,23 18:18 19:15 20:1,19 20:23 24:11 27:20,23 31:2 32:21 33:8 37:12 38:7 42:23 48:21 51:3,24 60:9 66:1 69:25 72:4,5,16 73:19 82:12 83:6,10,15
thinking 8:18 14:15
thinner 53:21
third 3:19,22 6:13,25 7:4,12 7:22 8:21,25 9:5 13:12 14:2 14:18 28:3 37:21 57:9 61:6 80:12,16
thought 19:14 52:7 54:2
three 31:7
tilted 46:4,5
time 8:21 12:3 21:5 31:22 32:20,22 41:25 61:15 67:15 75:20 84:6,7 85:18
timeframe 85:8
times 21:18
today 4:12,15 5:18,24 7:18 10:19 11:6,14 15:23 17:14 25:20 27:21 30:19 37:13 38:1 40:24 41:20 56:20 64:19 66:15 71:12 80:20
today's 6:7,21 7:8,16 9:24 13:19,25 30:11 57:13 61:19
together 34:22 47:5 61:17 68:23
told 16:5
top 11:13 18:15 22:25 23:2 28:7,19 30:17 34:19 35:4 40:23 46:13 52:11,12,24 53:2 54:8,18 55:9,12 58:5,9 58:13,17,22,22 59:7,17,21,25 60:12,12 62:4 62:10 63:4 69:18 70:5
torque 20:17 21:3,9,23 22:11 23:12,14 25:22 75:24 83:1,7,12
torrence 3:13 3:21 37:18,25 38:5,10,11,13 38:15,24 39:13 39:20,22 40:10 40:15 41:10,14 41:25 43:7,10 45:20,21 46:7 46:20,23 47:2 47:8,14 49:9 49:24 50:16 51:8,9 55:11 55:24 56:17,22 59:14,24 60:5 60:6,11,17,18
torsional 21:19 22:3,4,12 23:23 24:1,3,3 24:22
towards 32:11 40:23 46:4 47:11 48:1 51:18 53:23 58:13 59:8 64:22 65:7
trademark 1:1
transcribed 84:9
transcript 70:25 85:6,19 87:5,8
transferred 24:4
transmit 75:24
transverse 52:18
trial 1:2 33:3
true 84:11 87:8
truth 4:2,12
try 32:20 39:12 76:2

Veritext Legal Solutions
Calendar-CA@veritext.com 866-299-5127
Sandvik EX2021 Page 110
CMS Cepcor v. Sandvik IPR2024-01381

trying 8:17 23:18,22 24:19 41:9,24 62:24 68:18 71:3 74:5
tsanks 2:16 85:2
tubes 56:12
turning 7:25 14:7 20:3 36:15,21 43:17
two 4:20 5:11 5:15 6:14,18 6:19 8:25 15:6 28:15 29:11 31:23 43:23 44:5 49:13,17 49:23,24 50:2 54:1 73:6
type 23:2,22 24:17 25:4 62:1,3 64:16
types 49:23,25 50:2
typically 31:12

u

uh 21:17 41:17 47:9 63:9
under 33:2 84:7,10
understand 4:11 5:5,9 10:2 16:18 19:10 20:10,16 21:2 21:8,22 23:9 23:18,23 24:20 25:14,16 28:11 29:1 35:19,22 36:22 38:4 39:9 41:9 43:22 44:7,9 44:13,21,25 45:2 46:8 47:1 48:13 52:11 55:25 62:24 64:10,12 65:6 65:24 66:5,8 67:6 68:18 69:10,15 70:14 71:3,17 72:1 72:12,25 73:8 73:21 74:22 75:2,11 76:14 76:19 77:11,19 78:5,16,22 79:5,7,12,17 82:9,13,19 83:1
understanding 19:18 20:13 26:9 29:8,10 31:5,16 34:8 34:12,21,24 35:15 37:4 38:7,23 40:25 41:24 42:2 44:10 49:18 55:23 57:16 63:3,16 64:18 67:10,13,16 70:16 73:20 74:17 75:15 80:22
understands 75:17
undertaken 79:21
unimportant 42:24
unit 22:9,12
united 1:1
units 22:5 26:3 26:6 83:9
unpatentable 8:19
upper 34:4 58:1 68:10,17 78:24
upright 34:3
upstanding 33:25
used 15:16 16:2 17:10 24:6,14 27:24 35:21 62:2 65:11 71:9,14,18 72:22 76:1 78:1 81:10 82:20 85:19
uspto 39:10
usually 35:20

v

v 4:10 85:4 86:1 87:1
vague 65:22
variation 49:1
varieties 25:17
various 16:25 21:20
vary 21:19 22:1 22:3,3 25:8 52:11
vent 56:12
verify 85:9
veritext 2:2 85:14,23
veritext.com 85:15
versus 21:23
vertical 62:9 67:8 70:12
videos 74:6
viewed 33:9
volume 1:16
vs 1:7

w

w 49:14,20 50:5
waiting 68:11
wall 54:16 55:7 58:12,14
want 30:23 31:9 32:15 47:6 65:5,13 66:2 71:16 82:4
wanted 14:13 38:22 65:1
way 19:14 21:6 21:12 26:8

Veritext Legal Solutions
Calendar-CA@veritext.com 866-299-5127
Sandvik EX2021 Page 111
CMS Cepcor v. Sandvik IPR2024-01381

30:20 39:1 42:8 58:12 66:1 69:24 72:18
we've 4:20 23:13 76:3,6
wear 19:23 27:4 38:10,12 44:14 45:9 47:17,24 48:5 48:11,17,19 51:4,5,19 52:1 58:10 59:16,19 60:1
website 39:10 74:3
week 61:21
went 6:1 17:19
west 84:23
whereof 84:16
wilcox 74:10
willing 42:7
wilshire 2:22
winter 2:15
witness 9:19 32:1 34:11,24 35:18,25 36:6 36:11,19,25 37:12 39:5 42:4 47:7 65:9 72:16 75:15 81:5 83:20 84:7,16 85:8 85:10,12,18
wonderful 5:11
words 61:22 62:23
work 12:17,20 12:24 17:25
worked 18:2
working 21:13
works 31:6,15 62:25 64:18,25 65:15
worthwhile 4:22
wrap 83:16

x

x 3:1,7 49:14 49:18 50:4,11

y

y 49:14,18 50:4 50:11
yagi 3:25 80:9 80:23 82:5,13 82:19,20,24 83:10
yeah 21:6 35:18 44:23 48:16 52:24 64:10 69:17 70:20
yellow 20:5 22:17 28:23
yesterday 6:1
yoke 62:8 67:4 67:6,8,11,14,17 67:19,22,22,24 68:4,7,16,19 69:1,5,9,10,15 69:16,19,21,22 70:3,8,8,10,11 70:17,17 71:4 71:12,17 72:2 72:3,13,14 73:1,3,8,8,12 73:13,14,14,17 73:18 75:12,12 75:23,24 76:14 76:16,17,19,21 77:12,13 78:16 78:17,22,23 79:5,8,17,19
young 2:21

z

z 49:14,20 50:5
zone 62:12,21