

1 UNITED STATES PATENT AND TRADEMARK OFFICE
2 BEFORE THE PATENT TRIAL AND APPEAL BOARD
3
4

5 CMS CEP COR LTD., and CMS)
6 CEP COR AMERICAS LLC,)
7) Case No. IPR2024-01380
8) Patent No. 9,827,568
9)
10 vs.)
11)
12)
13 SANDVIK INTELLECTUAL)
14 PROPERTY AB,) Case No. IPR2024-01381
15) Patent No. 11,014,090
16 Patent Owner.)
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16 REMOTE DEPOSITION OF DAVID SMITH

17 VOLUME II

18 October 24, 2025
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25 Reported by:

Vanessa S. Gosney, CSR #752, RPR

Page 1

1 REMOTE DEPOSITION OF DAVID SMITH

2
3 BE IT REMEMBERED that the remote deposition of
4 DAVID SMITH was taken by the Patent Owner before
5 Veritext Idaho, Vanessa S. Gosney, Court Reporter, Idaho
6 CSR No. 752, Oregon CSR No. 20-0472, Washington CSR No.
7 20122235, and Notary Public in and for the County of
8 Ada, State of Idaho, on Friday, the 24th day of October,
9 2025, commencing at the hour of 10:06 a.m. in the
10 above-entitled matter.

11
12 APPEARING REMOTELY:

13
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I N D E X
E X A M I N A T I O N

DAVID SMITH	PAGE
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BY MR. ARJOMAND.....	5

E X H I B I T S

NO.	
Exhibit 1001	United States Patent..... 25
	Patent No.: US 9,827,568 B2.
	(7 pages)
Exhibit 1001A	United States Patent..... 52
	Patent No.: US 11,014,090 B2.
	(10 pages)
Exhibit 1002	Declaration of David Smith ... 10
	In Support of Petition for
	Inter Partes Review of
	U.S. Patent No. 9,827,568.
	(85 pages)
Exhibit 1002A	Declaration of 10
	David G. Smith in Support of
	Petition for Inter Partes
	Review of U.S. Patent
	11,014,090.
	(97 pages)
Exhibit 1017	United States Patent..... 41
	Patent No.: US 4,410,143.
	(7 pages)
Exhibit 1033	June 24, 1958..... 74
	C. A. Harless, et al.,
	Patent No. 2,840,399.
	(5 pages)

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E X H I B I T S (Continued)

NO.

Exhibit 1039 United States Patent..... 55
Patent No.: US 4,037,800.
(6 pages)

Exhibit 1043 Second Declaration of 12
David G. Smith, in Support of
Petition for Inter Partes
Review of U.S. Patent
9,827,568.
(87 pages)

1 P R O C E E D I N G S

2
3 DAVID SMITH,
4 a witness having been first duly sworn remotely to
5 tell the truth, the whole truth and nothing but the
6 truth, was examined and testified as follows:
7

8 EXAMINATION

9 BY MR. ARJOMAND:

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

12 A. My name is David Smith. D-A-V-I-D,
13 S-M-I-T-H.

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

16 A. I do.

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

19 A. Not that I can think of.

20 Q. Aside from these proceedings, have you
21 ever taken a deposition in an IPR proceeding?

22 A. I have.

23 Q. So I believe you're familiar with the
24 ground rules, but I will just summarize them
25 briefly so that we're all on the same page. I will

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1 ask a question, Mr. Sanks here may lodge an
2 objection, and then you will answer my question
3 unless Mr. Sanks directs you to not answer the
4 question on the basis of privilege or confidential
5 information.

6 Does that make sense to you?

7 A. Yes.

8 Q. We can take a break whenever you need,
9 but we can't take a break on a pending question.

10 Do you understand that?

11 A. Yes.

12 Q. During cross-examination you cannot
13 speak to Mr. Sanks about the subject matter of your
14 testimony.

15 Do you understand that?

16 A. Yes.

17 Q. Now, as is evident with us, but might
18 not be clear from the record, we're taking this
19 deposition remotely.

20 Are you in your office?

21 A. I am.

22 Q. Okay. Is there anyone currently present
23 with you in the office?

24 A. Not in this room.

25 Q. Okay. And do you have any printed

1 documents with you?

2 A. No, I don't.

3 Q. In terms of your computer and computer
4 monitor that you are utilizing to interface with us
5 remotely, do you have any windows open beyond the
6 Zoom application?

7 A. I have the Exhibit Share window open.

8 Q. Any other windows open?

9 A. I guess that's part of a web browser,
10 but nothing else is open on it.

11 Q. Okay. Great.

12 I ask that you not open any windows
13 during the deposition. The deposition should just
14 be similar to what we did previously in Boise,
15 Idaho, just asking you questions based on the
16 documents that are in front of you.

17 Do you understand that?

18 A. Yes.

19 Q. On that note, do you have any
20 communication equipment such as a smart phone that
21 is open near you?

22 A. I don't.

23 Q. Okay. Is there anything open in your
24 vicinity that you would allow someone to
25 communicate with you in realtime during the

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1 deposition?

2 A. There's not.

3 Q. Okay. Thank you.

4 So I think we've discussed this in the
5 previous deposition, but this deposition is
6 directed to two IPR proceedings. There's an IPR
7 proceeding 2024-01380 relating to the '568 patent.
8 And there's another proceeding, IPR2024-01381
9 directed to the '090 patent.

10 Is that consistent with your
11 understanding?

12 A. I don't have the numbers memorized, but
13 there are two, and I will take your word that those
14 are what they are.

15 Q. Okay. Great.

16 The testimony that you'll be providing
17 today will be directed to both proceedings, unless
18 my question is specifically directed to one or the
19 other.

20 Is that okay with you?

21 A. Sorry, you kind of cut out in the middle
22 of that. Can you say that again?

23 Q. Sure. The questions that I'll be asking
24 you will be directed to both proceedings unless my
25 question from its context is directly limited to

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1 just one proceeding.

2 Does that make sense to you?

3 A. I think so, yeah. We will do the best
4 we can there.

5 Q. Okay. Great.

6 Now, Mr. Smith, you have previously
7 provided declarations marked Exhibit 1002 that
8 accompany the petitions in both proceedings,
9 correct?

10 A. I did provide declarations. I don't
11 know exactly what they were marked as, but I did
12 provide declarations.

13 Q. Great. So just for the record to be
14 clear, you provided two declarations in each
15 proceeding. In the 01380 proceeding, you provided
16 an initial declaration marked Exhibit 1002, and
17 then a second declaration that's marked Exhibit
18 No. 1043.

19 Does that square with your recollection?

20 A. I did provide two declarations for each
21 of the proceedings. Again, I don't know what they
22 were marked, but I did provide two.

23 Q. Okay. And in the 01381 proceeding, you
24 provided an initial declaration that was marked
25 Exhibit 1002, and a second declaration that was

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1 marked Exhibit 1044.

2 Does that square with your recollection?

3 A. Again, I don't know what they were
4 marked as, but I did provide two declarations.

5 Q. Okay. Great.

6 So let me put both your initial
7 declarations that were Exhibit 1002 in the Exhibit
8 Share folder so you can have access to that. I
9 will do that with your other declarations later
10 today, but let's start with Exhibit 1002 first.

11 (Deposition Exhibit No. 1002 marked.)

12 THE WITNESS: So I have my first declaration
13 on the '568 patent.

14 Q. BY MR. ARJOMAND: Well, it's giving me
15 an error in trying to submit your first declaration
16 in the 01381 proceeding because it has the same
17 exhibit number. Let me just mark that as 1002A for
18 the purpose of the stamp, but we will refer to it
19 as Exhibit 1002 to be consistent with the record in
20 the IPR proceeding.

21 (Deposition Exhibit No. 1002A marked.)

22 MR. ARJOMAND: Mr. Sanks, are you able to
23 access the two exhibits?

24 MR. SANKS: Yes.

25 MR. ARJOMAND: Great.

1 Q. BY MR. ARJOMAND: Mr. Smith, let me know
2 when you have both exhibits.

3 A. I have both exhibits.

4 Q. Okay. Wonderful.

5 So let me first direct you to
6 Exhibit 1002 in the 01380 proceeding. And I want
7 to direct you to Paragraph 10.

8 Let me know when you are there,
9 Mr. Smith.

10 A. Okay.

11 Q. And take a moment to read that paragraph
12 to yourself.

13 A. Okay.

14 Q. Do you see that you testified that you
15 have been informed that the effective filing date
16 for this analysis, I presume that refers to the
17 analysis in your declaration, is August 2nd, 2012?

18 A. Yes.

19 Q. And is that the priority date that you
20 utilized in your analysis for this declaration,
21 specifically Exhibit 1002?

22 A. Yes.

23 Q. And did you use this priority date for
24 your analysis in your second declaration in the
25 01380 proceeding, specifically Exhibit 1043?

1 A. Do you have Exhibit 1043 just so I know
2 what we're talking about?

3 Q. Sure. Let me just upload those exhibits
4 as well, specifically your two declarations in
5 those two proceedings.

6 For some reason it's giving me an
7 error -- strike that.

8 For some reason it is giving me an error
9 with respect to introducing Exhibit 1044, which is
10 your second declaration in the 01381 proceeding.

11 (Deposition Exhibit No. 1043 marked.)

12 Q. BY MR. ARJOMAND: Did you receive your
13 second declaration in the 01380 proceeding?

14 A. I did. I did receive Exhibit 1043.

15 Q. All right. Let's first proceed with the
16 01381 proceeding and we can revert back to the
17 other proceeding when we get a chance to check the
18 interface again.

19 So let me ask you my question again.
20 Did you utilize the priority date of August 2nd,
21 2012, with respect to your analysis in Exhibit 1043
22 in the 01380 proceeding?

23 A. I did, yes.

24 Q. Okay. Now, let me direct you to
25 Paragraph 9 of your first declaration, Exhibit 1002

1 in the 01381 proceeding. Take a minute to read
2 that paragraph to yourself.

3 A. Okay.

4 Q. Now, do you see the reference to
5 May 23rd, 2014?

6 A. I do.

7 Q. Is that the priority date that you
8 utilized for your analysis for Exhibit 1002 in the
9 01381 proceeding?

10 A. It is.

11 Q. And while I understand you don't have
12 your second declaration in the 01381 proceeding in
13 front of you, do you recall as you sit here whether
14 you used the same priority date, May 23rd, 2014,
15 for that analysis?

16 A. Yes, I would have used the same priority
17 date for both declarations.

18 Q. Okay. Thank you.

19 So let me turn back to your declaration
20 of Exhibit 1002 in the 01380 proceeding. Let me
21 know when you have that exhibit available.

22 A. Okay.

23 Q. And I would like you to turn to
24 Paragraph 30 of your declaration.

25 A. Okay.

1 Q. Have you had a chance to read that
2 paragraph, Mr. Smith?

3 A. I can.

4 Okay. I've got that read.

5 Q. Now, Paragraph 30 of your declaration
6 sets forth the level of skill for a person of
7 ordinary skill in the art; is that correct?

8 A. It does.

9 Q. And did you use that level of skill for
10 a person of ordinary skill in the art in preparing
11 the analysis in Exhibit 1002 in the 01380
12 proceeding?

13 A. I did.

14 Q. And do you recall if you utilized the
15 same level of skill for your analysis in your
16 second declaration at Exhibit 1043 in the 01380
17 proceeding?

18 A. Yes, I would have used the same level of
19 ordinary skill in the second declaration.

20 Q. And as you sit here today, you believe
21 that this is the appropriate level of skill for a
22 person of ordinary skill in the art with respect to
23 the 01380 proceeding?

24 A. I do.

25 Q. Let me turn or direct you to Paragraph

1 30 of Exhibit 1002 in the 01381 proceeding.

2 Let me know when you're there.

3 A. Okay. I'm there.

4 Q. Can you take a minute to read that
5 paragraph to yourself?

6 A. Okay.

7 Q. Is that the level of skill of a person
8 of ordinary skill in the art that you utilized for
9 your analysis in Exhibit 1002 in the 01381
10 proceeding?

11 A. It is, yes.

12 Q. And while I know you don't have
13 Exhibit 1044 in the 01381 proceeding, that being
14 your second declaration, do you recall if you
15 utilized the same level of skill for your analysis
16 in that declaration?

17 A. I would have used the same level of
18 skill in both declarations.

19 Q. Okay. And do you stand by this level of
20 skill today in your testimony with respect to the
21 01381 proceeding?

22 A. Yes, I do.

23 Q. Great. And the level of skill that
24 you've identified in the 01380 proceeding is the
25 same level of skill you identified in the 01381

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1 proceeding; is that correct?

2 A. Yes, I do believe they're the same.

3 Q. So if I refer to a person of ordinary
4 skill in the art in my questions today, will you be
5 understanding that I'm referring to the person that
6 you've set forth in Paragraphs 30 of Exhibit 1002
7 in both proceedings?

8 A. I think that's fair.

9 Q. And if I say "as of the invention date"
10 with respect to the '568 patent, would you
11 understand that to be August 2012?

12 A. Yes.

13 Q. And if I said "as of the priority
14 date" -- actually, strike that.

15 In the previous question I said "the
16 invention date." I should say if I said "as of the
17 priority date" with respect to the '568 patent,
18 would you understand that to be August 2012? Would
19 you understand that correctly?

20 A. Yes.

21 Q. Okay. And in the case of the '090
22 patent, if I say "the priority date," you would be
23 utilizing May 23rd, 2014; is that correct?

24 A. That's correct.

25 Q. Mr. Smith, what did you do to prepare

1 for your deposition today?

2 A. I reviewed a number of documents and had
3 a conversation with counsel.

4 Q. Okay. What documents did you review?

5 A. I reviewed my declarations. I reviewed
6 the -- I believe they were called the preliminary
7 guidance or something similar to that from the
8 PTAB. I looked at the patents in suits. I looked
9 at prior references that are cited in my report.

10 Q. Anything else?

11 A. There were more things that I reviewed
12 in the preparation of these declarations, but as
13 far as what I did specifically for today and the
14 last couple of days, I think that's it.

15 Q. Okay. And in terms of your preparation
16 for today's deposition, how many hours would you
17 say you spent reviewing the documents that you just
18 listed?

19 A. I don't know. Probably five to ten
20 hours.

21 Q. And you mentioned that you spoke to
22 counsel.

23 Did you speak to Mr. Sanks?

24 A. I did.

25 Q. Did you speak with any other counsel?

1 A. No.

2 Q. Did you speak about this deposition with
3 anyone else beyond Mr. Sanks?

4 A. Probably mentioned it to my wife.

5 Q. Putting aside family.

6 A. No, I don't think so.

7 Q. And how long did you speak with
8 Mr. Sanks?

9 A. I think our conversation was about an
10 hour.

11 Q. And when was that conversation?

12 A. I believe it was on Wednesday.

13 Q. When you say you reviewed your
14 declarations in preparation for today's deposition,
15 did you review both sets of declarations for the
16 two proceedings?

17 A. My focus was really on the second
18 declarations for each of the proceedings.

19 Q. In reviewing your second declarations in
20 each of the proceedings, did you find any errors
21 that you'd like to correct?

22 A. I think there is one thing where I had
23 mentioned Aberg, I believe, in one of them or maybe
24 both of them. But that's a reference that I didn't
25 end up relying on and thought I had removed, but

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1 didn't remove it.

2 Q. And that reference to Aberg was in one
3 of your second declarations in these two
4 proceedings?

5 A. I believe so.

6 Q. Okay. Is there any other change you
7 would like to discuss with respect to any of the
8 four declarations you've submitted in these
9 proceedings?

10 A. No, I don't think so.

11 Q. You mentioned that you reviewed the --
12 your declarations, the preliminary guidances, the
13 patents in suit, and the prior art references cited
14 in your declarations in advance or in preparation
15 for today's deposition.

16 Did you review any documents that were
17 not cited in your declaration beyond the
18 preliminary guidances?

19 A. I don't believe I did specific to my
20 preparation for today. I might have reviewed them
21 earlier, but specific to preparation, I don't think
22 so.

23 Q. Okay. Did you review any dictionaries
24 in preparation for today's deposition?

25 A. Only what is cited in my declarations.

1 Q. Okay. Thank you.

2 So you mentioned a few times about your
3 preparation or the work that you've done in
4 preparing your second declarations in these two
5 proceedings.

6 When did you prepare those declarations,
7 to the best of your recollection?

8 A. I believe it would have been in August
9 and September.

10 Q. And do you remember how much time you
11 spent in preparing and finalizing those
12 declarations?

13 A. I don't have the numbers in front of me.

14 Q. Roughly.

15 A. It was probably three to four weeks.

16 Q. Is that for each declaration or
17 combined?

18 A. That would be combined.

19 Q. So you spent about three to four weeks
20 of your time preparing the two declarations that
21 became Exhibit 1043 and 1044; is that correct, in
22 the two proceedings?

23 A. So I did have help from some of my
24 co-workers in preparing them, but I think the
25 overall amount of time spent was in that three- to

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1 four-week range.

2 Q. And who were the co-workers that
3 assisted you in preparing the two declarations?

4 A. Loren Sackett helped with the '568
5 declaration, and John Marshall helped with the '090
6 declaration.

7 Q. What documents did you review in
8 preparing your second declaration in the 01380
9 proceeding, specifically Exhibit 1043?

10 A. There were a number of documents I
11 reviewed. There was a declaration from Kytomaa.
12 There was a petition to amend. There might have
13 been another document along with that. And then,
14 of course, the documents that were cited in my
15 report.

16 Q. So you mentioned the declaration of
17 Dr. Kytomaa. You mentioned petition, but motion to
18 amend, and the documents cited in your report.

19 Were there any other documents that you
20 reviewed in preparing your declaration in the 01380
21 proceeding?

22 A. There might have been. There have been
23 a lot of documents in this case so far.

24 Q. As you sit here, do you have
25 recollection of any other documents that you've

1 reviewed beyond what I just listed in my previous
2 question?

3 A. For the second declaration, in addition
4 to the documents reviewed for my first declaration,
5 I think those are documents that I reviewed.

6 Q. Okay. And for the 01381 proceeding,
7 what documents did you review in preparing your
8 second declaration, Exhibit 1044?

9 A. There were a number of documents. I
10 think there were two additional declarations from
11 Dr. Kytomaa. There was another petition to amend
12 or motion to amend. Again, I don't have these in
13 front of me, so I don't know exactly what they are
14 called. There were probably some other documents
15 that went along with Dr. Kytomaa's declarations. I
16 don't remember what they are called, though, off
17 the top of my head.

18 Q. Okay. And did you review your first
19 declaration in the 01381 proceeding while preparing
20 your second declaration in that proceeding?

21 A. I did.

22 Q. So you mentioned that you reviewed two
23 declarations from Dr. Kytomaa.

24 Do you know why there were two
25 declarations, Mr. Smith?

1 A. I'm trying to remember, but I don't have
2 those in front of me so I don't recall off the top
3 of my head right now.

4 Q. Well, let me say that one declaration
5 accompanied the patent owner response, and another
6 declaration accompanied a contingent motion to
7 amend.

8 Does that refresh your recollection?

9 A. That sounds right.

10 Q. And did you review the patent owner
11 response in preparing your declaration in the 01381
12 proceeding?

13 A. Yes, I do believe I reviewed the patent
14 owner response in both proceedings.

15 Q. Okay. I don't believe there was a
16 patent owner response in the 01380 proceeding, but
17 there were motions to amend in both proceedings.

18 Do you recall reviewing both motions to
19 amend?

20 A. Yes.

21 Q. Okay. Aside from Ms. Sackett and
22 Mr. Marshall, did you work with anyone else in
23 preparing your two declarations in these
24 proceedings?

25 A. Just as a line of correction, Loren

1 Sackett is male, so it is Mr. Sackett.

2 Q. Oh, sorry.

3 A. But aside from those two, I think that
4 was the extent.

5 Q. Did you work with counsel in preparing
6 your two second declarations in these two
7 proceedings?

8 A. Yes, we certainly discussed it.

9 Q. Did you discuss it with Mr. Sanks; is
10 that correct?

11 A. Yes.

12 Q. Did you discuss it with any other
13 counsel?

14 A. I believe there was someone else at his
15 firm that was on at least one of the calls that we
16 had.

17 Q. Okay. But as you sit here today, you
18 don't recall that person's name?

19 A. I don't, I'm sorry.

20 Q. Okay. All right. Let me see if I can
21 upload your second declaration in the 01381
22 proceeding. I am going to try to give it one more
23 shot here. I still get an error, so I will at a
24 break reach out to Veritext to see if there is a
25 way that we can address that. But for now let me

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1 move on.

2 Let me introduce previously marked
3 Exhibit 1001, which is the '568 patent in the 01380
4 proceeding.

5 (Deposition Exhibit No. 1001 marked.)

6 Q. BY MR. ARJOMAND: Let me know if you
7 have received that exhibit?

8 A. Okay. I have that.

9 Q. Mr. Smith, do you recognize this
10 document?

11 A. I do.

12 Q. What is it?

13 A. It's the U.S. Patents 9,827,568.

14 Q. Do you recall how much time you have
15 spent reviewing the '568 patent since our last
16 deposition in June 11th, 2025?

17 A. I don't have a specific number for you.

18 Q. Do you have a ballpark number?

19 A. I don't even know if I could do that.
20 It's something I have referred back to several
21 times.

22 Q. Okay. Since June 11th, 2025, have you
23 read the entirety of the '568 patent?

24 A. I don't think I have sat down and read
25 it start to finish since then.

1 Q. Okay. But as you sit here today, you
2 would say that you understand everything described
3 within the '568 patent?

4 A. I think so. I don't have a perfect
5 recollection, but I think I understand it pretty
6 well.

7 Q. Okay. Great.

8 So let me direct you to Figure 2 of the
9 '568 patent. Let me know when you are there.

10 A. Okay. I am there.

11 Q. Do you see on the middle left there's a
12 reference number to 112?

13 A. I do.

14 Q. Do you know what 112 is referring to?

15 A. 112 looks like it is referring to a
16 bearing assembly.

17 Q. Okay. Do you see the reference numeral
18 113 on the right-hand side of Figure 2?

19 A. I do.

20 Q. And what is 113 referring to?

21 A. The patent refers to 113 as an upper end
22 region of a shaft.

23 Q. Can you explain to me the operational
24 relationship between 113 -- or element 113 of the
25 shaft and the bearing assembly 112?

1 A. I'm not sure what you mean by that.

2 Q. What is it that you don't understand?

3 A. I guess I don't understand what you're
4 asking for in that question.

5 Q. Okay. Let me see if I can ask it in a
6 slightly different way.

7 By the way, I am hearing someone else in
8 the background. Is that in your office, Mr. Smith?

9 A. There are thin walls in here. There's
10 nobody in this room with me, but there are things
11 going on.

12 Q. Okay. Are you in Boise, Idaho or in the
13 city that you have your office in?

14 A. Technically I'm in our Idaho office,
15 which is in Nampa, Idaho, which is right next to
16 Boise.

17 Q. Okay. So let me see if I can ask the
18 question again.

19 So portion 113 of the shaft and the
20 bearing assembly 112 are -- operate together,
21 correct?

22 A. They are both part of the rock crusher.

23 Q. How do they -- strike that.

24 What is the operational relationship
25 between portion 113 of the shaft and the bearing

Page 27

1 assembly 112?

2 A. What is the operational relationship?

3 Q. Yes.

4 A. My recollection is that the shaft
5 rotates and the bearing 112 helps to limit and
6 control that rotation.

7 Q. How does the shaft rotate relative to
8 the bearing assembly 112?

9 A. I'm not sure what you mean when you say
10 that.

11 Q. What is it about that question that you
12 don't understand?

13 A. What you're getting at. I'm not sure
14 how --

15 Q. Okay. Let me ask --

16 A. I don't understand what I don't
17 understand.

18 Q. Okay. Let me ask you this.

19 Does the conical portion 113 of the
20 shaft rotate?

21 A. So as described in Column 3, starting
22 around Line 59, it says, "A drive (not shown) is
23 coupled to main shaft 107 via a drive shaft 108 and
24 suitable gearing 116 so as to rotate shaft 107
25 eccentrically about longitudinal axis 115 and cause

1 crushing head 103 to perform a gyratory pendulum
2 movement and crush material introduced into
3 crushing gap 104."

4 Q. So you would agree that the shaft
5 rotates eccentrically about longitudinal axis 115;
6 is that correct?

7 A. Yes. That's what it says.

8 Q. And would you understand that the shaft
9 portion 113 rotates concentrically about its own
10 longitudinal axis 115?

11 A. Can you say that one more time?

12 Q. Sure. Would you understand that the
13 shaft portion 113 rotates concentrically about its
14 longitudinal axis 115?

15 A. So the patent describes it that shaft
16 107, of which 113 is a part, describes that it
17 rotates eccentrically about longitudinal axis 115.

18 Q. Right. So what I'm asking you is does
19 the shaft portion 113 rotate concentrically about
20 longitudinal axis 115 in addition to its rotation
21 eccentrically about that longitudinal axis?

22 A. So I believe that there is an axis that
23 it rotates about. But as it's explained in the
24 patent, it rotates eccentrically about longitudinal
25 axis 115.

1 Q. Mr. Smith, is your -- strike that.

2 Mr. Smith, is it your understanding that
3 the shaft portion 113 only rotates eccentrically
4 about its longitudinal axis 115 during operation?

5 A. So this is not a question I have
6 expressly looked at previously so I want to make
7 sure I answer correctly. Can you say the question
8 one more time?

9 Q. Is it your understanding that the shaft
10 portion 113 only rotates eccentrically about its
11 longitudinal axis 115 during operation?

12 A. So my understanding is that there is
13 rotation. The patent is not terribly clear about
14 whether axis 115 is specific to the shaft or
15 specific to the machine.

16 For example, as we read in Column 3, it
17 says that the shaft 107 -- "so as to rotate shaft
18 107 eccentrically about longitudinal axis 115." So
19 the patent says that the shaft rotates
20 eccentrically about longitudinal axis 115.

21 Q. Mr. Smith, you know how gyratory rock
22 crushers work, correct?

23 A. Generally familiar with them, yes.

24 Q. You hold yourself out as an expert for
25 this proceeding, which is directed to gyratory rock

1 crushers; isn't that correct?

2 A. I do.

3 Q. So as you sit here today, do you know
4 that if during operation that main shaft rotates
5 both eccentrically and concentrically about the
6 longitudinal axis?

7 A. So my understanding is that the shaft is
8 rotating and that that -- so it's rotating about
9 its own axis and it is also rotating eccentrically
10 about an axis.

11 Q. Okay. So as you look at Figure 2 of the
12 '568 patent, is it your understanding that shaft
13 portion 113 rotates eccentrically as well as
14 rotating about its own axis?

15 A. My understanding is that that is the
16 case. I'm not sure that is explicitly described in
17 the patent, but it might be.

18 Q. Well, let me ask you this, Mr. Smith.
19 Would a person of ordinary skill in the art looking
20 at Figure 2 of the '568 patent understand that
21 during the operation of the gyratory rock crusher
22 that the shaft portion 113 is rotating
23 eccentrically and also concentrically about its
24 axis?

25 A. Again, I don't think it says in the '568

1 patent. But my recollection is that -- I will be
2 honest, I don't know specifically for this machine
3 as it's described in this patent. The rotation
4 described here is described as eccentric and I
5 don't think it goes into enough detail in this
6 patent to explain that. So I don't want to guess
7 and I don't know for certain if the physical
8 embodiment of this patent does that or not.

9 Q. Mr. Smith, you understand that what a
10 patent discloses goes beyond just what is
11 specifically written in the written description
12 portion of the patent; isn't that correct?

13 A. I'm not sure what the legal answer for
14 that is.

15 Q. What is your understanding?

16 A. My understanding is that a patent needs
17 to be written in a way that it describes the
18 invention.

19 Q. But that description includes not only
20 the written description, but it also includes the
21 figures and what a person of ordinary skill in the
22 art brings to the table while reading the written
23 description and viewing the figures; is that
24 correct?

25 A. That sounds correct, yes.

1 Q. All right. So let me turn you back to
2 Figure 2. As you look at Figure 2, would a person
3 of ordinary skill in the art understand that that
4 describes portion 113 of the shaft as rotating
5 freely in the bearing assembly 112?

6 A. What do you mean by "rotating freely"?
7 I think the rotation is driven in this case.

8 Q. What do you mean by the rotation being
9 "driven"?

10 A. Well, there are motors and gears that
11 cause the rotation.

12 Q. Oh, I see. What I'm getting at is would
13 a person of ordinary skill in the art looking at
14 Figure 2 of the '568 patent understand that portion
15 113 of the shaft is rotating at an unconstrained
16 manner with respect to the bearing assembly 112?

17 A. I wouldn't say it's rotating in an
18 unconstrained manner. I think the bearing is there
19 to constrain the rotation.

20 Q. How does it constrain -- strike that.
21 How does bearing assembly 112 constrain
22 the rotation of shaft portion 113?

23 A. The bearing 112 extends around the top
24 portion of the end of the shaft 113 and prevents it
25 from moving outside of that bearing.

1 Q. So you say that the bearing 112 extends
2 around the top portion of the end shaft 113 and
3 prevents the shaft from moving outside of that
4 bearing. Then would you understand that it
5 constrains the eccentric rotation of the shaft
6 only?

7 A. I would say that it constrains the
8 rotation of the shaft.

9 Q. Well, as we've discussed, there's two
10 rotations of the shaft, correct? There's the
11 eccentric rotation of the shaft and then the
12 rotation of the shaft itself, correct?

13 A. Sure.

14 Q. So what I'm trying to understand is,
15 does the bearing assembly constrain the concentric
16 rotation of the shaft itself?

17 A. So it constrains the concentric rotation
18 of the shaft itself such that it can't -- I mean,
19 it's held in place there. Like, that's the -- it's
20 not going to move. The shaft is not going to move
21 outside of that bearing. So it is providing some
22 constraint to that rotation. Just like a bearing
23 normally would for a rotating shaft.

24 Q. Mr. Smith, isn't your understanding that
25 a bearing allows a shaft to rotate freely within

1 the confines of the bearing?

2 A. Yes, I would say that a shaft can rotate
3 in a bearing. I think that's the purpose of a
4 bearing.

5 Q. Right. So taking a look at Figure 2 of
6 the '568 patent, would a person of ordinary skill
7 in the art understand that conical region 113 of
8 the shaft is rotating freely around its
9 longitudinal axis 115 with respect to bearing
10 assembly 112?

11 A. I think that a person of ordinary skill
12 in the art would understand that the end of the
13 shaft 113 is rotating within bearing 112.

14 Q. Okay. So let me just try to wrap this
15 up and then we can maybe take a break since we have
16 been going on for a little bit more than an hour.

17 So a person of ordinary skill in the art
18 looking at Figure 2 of the '568 patent would
19 understand that conical region 113 of the shaft is
20 rotating concentrically about longitudinal axis
21 115; is that correct?

22 A. That's not what it says in the patent.
23 It says it is rotating eccentrically about 115.

24 Q. But as we've discussed, Mr. Smith, there
25 are two types of rotations that are occurring with

1 respect to the conical region 113 of the shaft;
2 isn't that correct?

3 A. I believe so. But you keep asking me if
4 it is rotating concentrically about 115, and the
5 patent says that it's rotating eccentrically about
6 115.

7 Q. Okay. Well, I'm trying to just -- I am
8 trying to utilize some terminology so that the
9 questions and answers are clear. We've talked
10 about two rotations about the shaft, specifically
11 the conical region 113 of the shaft, correct?

12 A. We have.

13 Q. As you noted, there is description in
14 the '568 patent that the conical region 113 of the
15 shaft rotates eccentrically about longitudinal axis
16 115; is that correct?

17 A. That's correct.

18 Q. And you've also testified that a person
19 of ordinary skill in the art looking at Figure 2 of
20 the '568 patent would also understand that conical
21 region 113 of the shaft also rotates about itself?

22 A. Yes, I would agree to that.

23 Q. Okay. What I'm trying to ask is, would
24 a person of ordinary skill in the art looking at
25 Figure 2 of the '568 patent understand that conical

1 region 113 of the shaft rotates about itself freely
2 with respect to bearing assembly 112?

3 A. Yes, I think that's correct, that 113
4 will rotate within bearing 112.

5 Q. Okay.

6 MR. ARJOMAND: All right. Let's take a
7 break. Can we go off the record?

8 (Break taken from 11:18 a.m. to 11:34 a.m.)

9 Q. BY MR. ARJOMAND: Mr. Smith, during the
10 break, did you speak with anyone regarding the
11 subject matter of your deposition today?

12 A. No.

13 Q. All right. Let me now direct you to
14 Figure 1 of the '568 patent, Mr. Smith.

15 A. Okay.

16 Q. Do you see the crushing head 103 in
17 Figure 1 of the '568 patent?

18 A. I do.

19 Q. Do you see the crushing shell 105 in
20 Figure 1 of the '568 patent?

21 A. I do.

22 Q. And do you see the sleeve 114 in Figure
23 1 of the '568 patent?

24 A. I do.

25 Q. So can you explain to me the

1 relationship between the crushing head 103, the
2 crushing shell 105, and the sleeve 114 in Figure 1
3 of the '568 patent?

4 A. I would say that they are all parts and
5 components of the crushing machine.

6 Q. Okay. And how is the crushing head and
7 the crushing -- strike that.

8 How are the crushing head and the
9 crushing shell mounted on the shaft in Figure 1 of
10 the '568 patent?

11 A. So in Column 3 around Line 40, maybe 39,
12 "A crushing head 103 is mounted upon an elongate
13 shaft 107. A first crushing shell 105 is fixably
14 mounted on a crushing head 103 and a second
15 crushing shell 106 is fixably mounted at top frame
16 101."

17 Q. Can you explain to me how the crushing
18 head 103 and the crushing shell 105 would be
19 installed on the shaft in Figure 1 of the '568
20 patent?

21 A. Well, the patent certainly doesn't
22 explain that. There are a number of ways that
23 could be done. But the patent doesn't explain
24 which one is used.

25 Q. Let me ask you this, Mr. Smith. How

1 would a person of ordinary skill in the art looking
2 at Figure 1 of the '568 patent understand how
3 crushing head 103 and crushing shell 105 are
4 installed on the shaft?

5 A. I think they would understand that there
6 are a number of ways that that could be done, and
7 that the specific way those are mounted are not
8 described in this patent likely because they're not
9 particularly important to the invention of the main
10 shaft sleeve.

11 Q. Can you elaborate on the number of ways
12 that you referenced in your previous answer?

13 A. It could be press fit, it could be a
14 keyed fit, it could be bolted on, it could be
15 threaded on. There's a number of ways that that
16 could be done.

17 Q. At the time of the priority date for the
18 '568 patent, what would a person of ordinary skill
19 in the art understand to be the most typical way of
20 installing the crushing shell with the crushing
21 head?

22 A. That's not something that I have looked
23 in to to know what is the most common way of doing
24 that.

25 Q. Is that your answer, Mr. Smith?

1 A. Yes. That's not something that I have
2 looked in to at this point so I can't quantify with
3 certainty which way is the most common.

4 Q. Mr. Smith, a person looking at -- strike
5 that.

6 A person of ordinary skill in the art
7 looking at Figure 1 of the '568 patent would --
8 strike that.

9 Would a person of ordinary skill in the
10 art looking at Figure 1 of the '568 patent
11 understand that you need to remove sleeve 114
12 before you install or remove the crushing head 103
13 and the crushing shell 105?

14 A. Sorry, can you say that one more time
15 just to make sure I understood it correctly?

16 Q. Of course. Mr. Smith, would a person of
17 ordinary skill in the art looking at Figure 1 of
18 the '568 patent understand that you need to remove
19 sleeve 114 before you install or remove the
20 crushing head 103 and the crushing shell 105 in
21 Figure 1?

22 A. There would certainly need to be some
23 disassembly of the machine to remove or install the
24 crushing head and the crushing shell, but I don't
25 think a person of ordinary skill in the art would

1 understand that it's necessary to remove sleeve 114
2 to do that. I don't think the patent says either
3 way. But just looking at it, it looks like those
4 two pieces could slide over the end of the shaft
5 with the sleeve still on it, assuming this figure
6 is drawn to scale.

7 (Deposition Exhibit No. 1017 marked.)

8 Q. BY MR. ARJOMAND: Mr. Smith, I've shared
9 with you and Mr. Sanks Exhibit 1017 that was
10 previously marked in the 01381 proceeding. It's
11 the Polinski patent.

12 Let me know when you've received it.

13 A. I've got it.

14 Q. And I should just note for the record
15 that Polinski was -- strike that.

16 I should also note for the record the
17 Polinski patent was also previously marked as
18 Exhibit 1015 in the 01380 proceeding. Just to make
19 things easy for today, I will be referring to
20 Exhibit 1017. But my questions are really with
21 respect to Polinski directed to both proceedings
22 unless I indicate otherwise.

23 Do you understand, Mr. Smith?

24 A. I do.

25 Q. Mr. Smith, how much time have you spent

1 reviewing Polinski since our last deposition on
2 June 11th, 2025?

3 A. I don't have a good estimate for that.
4 It's something I have been back and forth to
5 several times.

6 Q. Since June 11th, 2025, have you read the
7 entirety of Polinski?

8 A. I don't think I sat down to specifically
9 read the whole thing in that time period, but I
10 have certainly read different portions of it.

11 Q. Okay. And do you understand everything
12 that is described within Polinski?

13 A. I have a pretty good understanding.

14 Q. All right. Let me direct you to Figure
15 2 of Polinski. Let me know when you're there.

16 A. Okay. I'm there.

17 Q. All right. Do you see mantle 10 in
18 Figure 2?

19 A. I do.

20 Q. And do you see the sleeve 12?

21 A. I do.

22 Q. And do you see the shaft region 11?

23 A. I do.

24 Q. Can you describe the connection between
25 the mantle 10 and the sleeve 12?

1 A. You say "describe the connection"?

2 Q. Yes.

3 A. So it says, starting on the end of
4 Column 2 around Line 67, "As shown in FIGS. 1 and
5 2, the bearing sleeve 12 extends generally
6 coextensively with the bearing journal 11, and
7 includes an externally threaded annular shoulder 28
8 about its lower periphery threadably receiving head
9 nut 29. The head nut 29 abuts the upper edge 30 of
10 the mantle 10 to secure it to the tapered portion
11 of the main shaft 7."

12 Q. So is that your understanding of how
13 mantle 10 is connected to sleeve 12 in Figure 2 of
14 the '568 patent?

15 A. Yes. Through the nut 29.

16 Q. Okay. And would a person of ordinary
17 skill in the art looking at Polinski, and Figure 2
18 specifically, understand that the mantle 10 exerts
19 forces on the sleeve 12 during operation of the
20 gyratory crusher?

21 A. So generally speaking, I would say that
22 most of the forces from the mantle 10 are directed
23 into the tapered or frustoconically-shaped mantle
24 supporting portion 8 of the shaft. I would believe
25 that most of the forces go directly from the mantle

1 into that section.

2 Q. So you said that you believe most of the
3 forces from the mantle 10 are directed to the
4 mantle supporting portion 8 of the main shaft; is
5 that correct?

6 A. Yes.

7 Q. So let me ask you again. Would a person
8 of ordinary skill in the art understand that
9 Polinski, specifically Figure 2, describes that the
10 mantle 10 exerts forces on the sleeve 12 during
11 operation of the gyratory crusher?

12 A. I don't think that's specifically
13 described in Figure 2. As we talked about before,
14 the mantle 10 is connected to sleeve 11 through the
15 nut, head nut 29 so the mantle and the shaft and
16 the nut and the sleeve are all connected together.
17 So when the machine is operational, will there be
18 stress in all of those components? Yes, I would
19 expect there to be stress there. Exactly what
20 direction that stress flows during the crushing
21 operation, it probably depends on exactly what's
22 being crushed and possibly other factors.

23 Q. What would be those other factors,
24 Mr. Smith?

25 A. It could be how fast it's rotating. The

1 types of rocks that are being crushed. If
2 something gets stuck or otherwise. The specific
3 materials that the shaft and the mantle and the nut
4 and the sleeve are all made of. Those are all
5 things that would affect whether and how much
6 stress is transferred, you know, from the mantle to
7 the nut to the sleeve, I would expect.

8 Q. So would your understanding be -- strike
9 that.

10 Would a person of ordinary skill in the
11 art understand that the stress that is experienced
12 by the sleeve from the mantle in Polinski would be
13 in the axial direction?

14 A. So the mantle is tapered, right, so the
15 top portion is narrower than the bottom portion.
16 So if you have material pushing on the mantle, I
17 would expect that it would generate both axial and
18 radial forces.

19 Q. On the sleeve 12; is that correct?

20 A. No. I was talking about the forces from
21 the material onto the mantle.

22 Q. So, yeah, what I was trying to ask you
23 is, would a person of ordinary skill in the art
24 looking at Polinski, specifically Figure 2,
25 understand that the mantle 10 during the operation

1 of the gyratory crusher exerts axial stresses on
2 sleeve 12?

3 A. Without doing a proper analysis, I can't
4 say for sure. I would imagine that as the mantle
5 is fit down onto that tapered section of the shaft
6 that most, if not all, of the forces from the
7 crushing operation from the material that go into
8 the mantle will go, essentially, directly into that
9 tapered portion of the shaft.

10 Q. What would you need to do to do a proper
11 analysis, Mr. Smith?

12 A. So if I was designing this machine I
13 would draw it up in a CAD system and do a finite
14 element analysis to determine how it reacted to
15 different loading conditions, different types of
16 materials, different sizes of materials, and how
17 those would affect the components based on the
18 actual materials that they are made of and how much
19 they deflect under those stresses because that all
20 is necessary to the proper analysis.

21 Q. Okay. And so if a person of ordinary
22 skill in the art looking at Polinski, and
23 specifically Figure 2 -- strike that.

24 So would an axial force on mantle 10 be
25 exerted on sleeve 12 in the axial direction?

1 A. So when we are talking about -- I guess,
2 can you clarify what you mean for me, what you mean
3 by axial direction on mantle 10, just so that we're
4 clear on that?

5 Q. Along the axis of the shaft. Let me
6 maybe ask the question in a slightly different way.

7 If there is an upward force associated
8 with mantle 10, would that be reflected axially on
9 sleeve 12?

10 A. If there was an upward force on mantle
11 10, assuming it overcame the friction between
12 mantle 10 and the tapered portion of the shaft that
13 it sits on and the weight of mantle 10, then I
14 expect that that would put forces into the nut that
15 would then be transferred into the sleeve.

16 But I think that that is not something
17 that you would expect in a crushing operation,
18 where an axial force would generally be expected in
19 the downward direction just based on the geometry
20 and the function.

21 Q. So let me direct you to Column 3, Lines
22 40 to 48 of Polinski.

23 A. Okay.

24 Q. What is your understanding of Column 3,
25 Lines 40 to 48 of Polinski?

1 Strike that. Let me ask it this way.

2 How would a person of ordinary skill in
3 the art reading Column 3, Lines 40 through 48,
4 understand that passage?

5 A. So I think a person of ordinary skill in
6 the art would understand that the threads on the
7 sleeve and the threads on the nut are designed in
8 such a way to prevent rotation of the sleeve on the
9 shaft even if those threads are damaged -- prevent
10 excessive movement of the sleeve on the shaft even
11 if the threads are damaged.

12 Q. So with that passage in mind, and
13 looking at Figure 2 of Polinski, would a person of
14 ordinary skill in the art expect that the mantle 10
15 exerts torsional forces on sleeve 12?

16 A. In the sentence above that, it says that
17 "in the present arrangement the eccentric is driven
18 in a clockwise direction so that the materials
19 moving through the crusher tend to rotate the
20 mantle in a counterclockwise direction." Then it
21 talks about the nuts being designed so that that
22 rotation tightens the nut, prevents it from being
23 transferred into the sleeve.

24 But if we look up further in Column 3
25 around Line 5, it says that -- I guess 4, "To

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1 secure it to the tapered portion of the main shaft
2 7, and at least one rod or dowel 31 is welded in a
3 corresponding pair of semicircular keyways in the
4 head nut and the mantle to prevent rotation between
5 these members, after the head nut is secured in
6 position."

7 So it sounds like they're welding keys
8 between the shaft and the nut and the mantle to
9 prevent that rotation. So should those keys fail,
10 then perhaps you could get some of that torsional
11 force from the mantle into the sleeve. But it
12 looks like it's designed to not have that happen.

13 Q. So would a person of ordinary skill in
14 the art, looking at Figure 2 of Polinski and the
15 Polinski patent in general, understand that the
16 mantle exerts bending forces on the sleeve 12?

17 A. Again, I don't think that the mantle
18 would really be exerting bending forces on the
19 sleeve 12. I think the forces from the mantle are
20 generally going to be transferred directly into the
21 shaft or the keyways for -- between the shaft and
22 the mantle.

23 Q. So Mr. Smith, I think as we've kind of
24 gone through the different types of stresses that
25 might be exerted from the mantle to the sleeve in

1 Figure 2 of Polinski, you have used words
2 like "generally" or "mostly" -- maybe not "mostly,"
3 but "generally" was used in your last response.

4 Would it be fair to say that a person of
5 ordinary skill in the art looking at Figure 2 of
6 Polinski and its disclosure would understand that
7 mantle 10 does provide or exert axial, torsional
8 and bending forces to sleeve 12?

9 A. So again, as we've discussed, it looks
10 like based on the disclosure that we've read with
11 the keyways and the shaft being tapered such that
12 it has a very similar shape to the mantle, that
13 it's designed in a way to prevent forces being
14 transferred from the mantle into the sleeve,
15 whether they are axial, bending, torsional, or
16 otherwise.

17 Q. But what I'm trying to understand from
18 you is whether the sleeve would still, in Figure 2
19 of Polinski, still experience axial, torsional, and
20 bending forces from mantle 10?

21 A. The real answer is, I don't know without
22 doing a full and complete analysis. You know, just
23 looking at it, I can't say with certainty that it
24 would. Reading the disclosure of the patent as we
25 have, it looks like it's been designed to prevent

1 that, to prevent forces from being transferred from
2 the mantle into the sleeve.

3 Q. So let me direct you back to Figure 2 of
4 the Polinski patent.

5 A. Okay.

6 Q. So do you see the head nut 29?

7 A. I do.

8 Q. Would a person of ordinary skill in the
9 art, looking at Figure 2 of Polinski and the
10 patent, generally understand that the head nut 29
11 secures the mantle 10 axially on the shaft?

12 A. Again, if we look at the top of Column
13 3, it says that "the head nut 29 abuts the upper
14 edge 30 of the mantle to secure it to the tapered
15 portion of the main shaft 7, and at least one rod
16 or dowel 31 is welded in a corresponding pair of
17 semi-circular keyways in the head nut and the
18 mantle to prevent rotation between these members
19 after the head nut is secured in position."

20 So I would say that, yes, the head nut
21 helps to secure the mantle in position on the
22 shaft.

23 Q. Just to be clear, my question was does
24 the head nut help to secure the mantle axially on
25 the shaft.

1 Would you agree with that?

2 A. Yeah, I would agree that, as we just
3 read, that the head nut helps to secure the tapered
4 portion -- or helps to secure the mantle to the
5 tapered portion of the main shaft and then it is
6 welded in place. So I would agree that it helps
7 with that process.

8 Q. All right. Let me shift gears for a
9 moment and direct you to the '090 patent. I'll
10 share that through Exhibit Share.

11 So I have just introduced Exhibit 1001
12 in the 01381 proceeding. It's the '090 patent.
13 And it was previously marked as Exhibit 1001 in
14 that proceeding, but for the purposes of Exhibit
15 Share, I had to mark it as Exhibit 1001A.

16 (Deposition Exhibit NO. 1001A marked.)

17 Q. BY MR. ARJOMAND: Let me know when
18 you've received it, Mr. Smith.

19 A. I have it.

20 Q. Great. So let me direct you to Figure 3
21 of the '090 patent.

22 Let me know when you're there.

23 A. Okay.

24 Q. So Figure 3 discloses a fluid supply
25 conduit, specifically an axial conduit section 204

1 and radially extending conduit section 205.

2 Do you see that?

3 A. I do.

4 Q. And then it also discloses two grooves
5 at axial upper groove 121a and 121b.

6 Do you see that?

7 A. I do.

8 Q. I should say that 121b is axial lower
9 groove.

10 And it also discloses a fluid channel
11 208.

12 Do you see that?

13 A. I do.

14 Q. Okay. With that background, how would a
15 person of ordinary skill in the art looking at
16 Figure 3 of the '090 patent understand the oil flow
17 path?

18 A. So the oil would be -- a person of
19 ordinary skill in the art would understand that the
20 oil is introduced at the entrance to axial column
21 204, and it would flow in through 204 into 205.
22 Then it would split and flow into 121a and 208, and
23 flow from 208 down to 121b.

24 Q. So the inlet for the oil is associated
25 with the axial conduit section 204; is that

1 correct?

2 A. Yes. I think that's how it would first
3 be introduced into this internal channel inside the
4 shaft.

5 Q. And how would you describe the position
6 of that inlet conduit section with respect to the
7 central longitudinal axis of the shaft?

8 A. I would probably say that it is offset
9 from the central access of the shaft.

10 Q. Okay. Looking at Figure 3 of the '090
11 patent, how easy would it be to understand the
12 order in which the oil enters the grooves as shown
13 in Figure 3?

14 A. Is that different than how I just
15 explained it a moment ago?

16 Q. If you could repeat your answer, I would
17 appreciate it.

18 A. Okay. The oil would be introduced into
19 204, it would flow into 205, then it would split
20 and part of it would fill 121a and part of it would
21 fill 208. As it flowed down 208 that would then
22 fill 121b.

23 Q. So would axial upper groove 121a receive
24 fluid before axial lower groove 121b?

25 A. I guess it depends on what you mean.

1 Does fluid first touch that groove 121a? I would
2 imagine that the fluid touches 121a before it
3 touches 121b. Does it completely fill 121a before
4 it completely fills 121b? Maybe. I don't know.

5 But as we're talking about building the
6 pressure, because oils are noncompressible, the
7 pressure would -- essentially the pressure in these
8 columns, once they were full, would be essentially
9 the same at all times.

10 Q. What would be the same, Mr. Smith?

11 A. The pressure of the oil.

12 Q. All right. Let's go off the record.

13 (Break taken from 12:21 p.m. to 1:02 p.m.)

14 Q. BY MR. ARJOMAND: Mr. Smith, welcome
15 back. During the lunch break, did you speak to
16 anyone regarding the subject matter of your
17 deposition today?

18 A. I did not.

19 Q. Okay. Let me now share with you
20 Exhibit 1039 previously marked in the 01380
21 proceeding.

22 (Deposition Exhibit No. 1039 marked.)

23 Q. BY MR. ARJOMAND: Mr. Smith, let me know
24 when you have that exhibit.

25 A. Okay.

1 Q. Do you recognize Exhibit 1039?
2 A. Yes, I do.
3 Q. What is it?
4 A. It is U.S. Patent 4,037,800 to Coxhill.
5 Q. And have you reviewed the Coxhill
6 patent, Mr. Smith?
7 A. I have.
8 Q. Do you recall how much time you spent in
9 reviewing the Coxhill patent?
10 A. I don't.
11 Q. Any ballpark estimation?
12 A. Not really. Maybe an hour or two.
13 Q. Okay. Have you read the Coxhill patent
14 in its entirety?
15 A. I have.
16 Q. And would you say that you understand
17 everything that is described in the Coxhill patent?
18 A. I think so. It's been a minute, but
19 yeah, I think so.
20 Q. When was the last time you reviewed the
21 Coxhill patent, Mr. Smith?
22 A. It was probably while I was working on
23 the declarations.
24 Q. Back in August or September of 2025?
25 A. Yes.

1 Q. Mr. Smith, did you review the
2 prosecution history of the 56 [sic] patent in
3 preparing your analysis in your second declaration
4 for the 01380 proceeding?

5 A. Sorry, can you say that again?

6 Q. Sure. Did you review the prosecution
7 history of the '568 patent in preparing your
8 analysis in your second declaration for the 01380
9 proceeding?

10 A. I did review it in connection with the
11 proceeding. I don't think I specifically went back
12 through it in connection with my second
13 declaration.

14 Q. Do you know if the Coxhill patent,
15 specifically U.S. Patent No. 4,037,800, was
16 considered during the prosecution of the '568
17 patent?

18 A. My recollection is that that was
19 submitted to the examiner as part of the
20 prosecution.

21 Q. And do you recall if the examiner
22 rejected the claims based on the Coxhill '800
23 patent?

24 A. I don't have a specific recollection.

25 Q. So let me turn your attention to Figure

1 1 of the Coxhill patent, Exhibit 1036 [sic].

2 A. Okay.

3 Q. So let me first direct you to the
4 crushing head 24.

5 Do you see that?

6 A. I do.

7 Q. It's on the top or middle right of
8 Figure 1.

9 A. Okay.

10 Q. And do you see the nut 34?

11 A. I do.

12 Q. And then do you see shaft 33?

13 A. I do.

14 Q. So how is the crusher head 24 in Coxhill
15 connected to the shaft 33?

16 A. If we look at Column 2, starting around
17 Line 26, it says, "A nut 34 is threadedly engaged
18 on the crusher shaft 33 at a position adjacent the
19 upper end of the crusher head 24 and serves to lock
20 the crusher head in operative position on the shaft
21 33."

22 Q. That's how you understand the crusher or
23 crushing head 24 is connected to the shaft 33 in
24 Coxhill?

25 A. That's what the patent specifies.

1 Q. And looking at Figure 1 of Coxhill,
2 that's how a person of ordinary skill in the art
3 would understand it?

4 A. I think that that is how a person of
5 ordinary skill in the art would understand it, yes.

6 Q. Okay. So how would a person of ordinary
7 skill in the art, looking at Figure 1 of Coxhill
8 and Coxhill's written description, understand the
9 forces exerted by crushing head 24 on the shaft 33
10 at the location where the nut 34 is threaded onto
11 the shaft 33?

12 A. Say that again?

13 Q. Sure. How would a person of ordinary
14 skill in the art, looking at Figure 1 of Coxhill
15 and Coxhill's written description, understand the
16 forces exerted by crushing head 24 on the shaft 33
17 at the location where the nut 34 is threaded onto
18 the shaft 33?

19 A. So it's difficult, again without doing a
20 full analysis, to determine exactly what forces
21 might be transferred from the crushing head to the
22 main shaft without doing a full analysis. We do
23 know that Coxhill discloses an -- what do they call
24 it? -- an antirotation device, I think is what they
25 call it, an antispin device, that -- so if we look

1 at Column 3, about Line 36, 37, "As previously
2 mentioned, the gyratory crusher 10 is provided with
3 an antispin device 45 to prevent undersirable [sic]
4 spinning of the crusher head 24."

5 So with that crusher head being -- you
6 know, with that antispin device that prevents the
7 undesirable rotation of this, what forces are going
8 into the shaft through the nut, there may be some
9 compressive forces, I guess some forces on the
10 threads as a thread connection would normally have
11 as the nut is pressing down on the crusher head.
12 Other than that, I'm not really sure without doing
13 a full analysis.

14 Q. Okay. Let me ask you this way.

15 Would crushing head 24 via nut 34 exert
16 an axial force on shaft 33 at the connection
17 between shaft 33 and 34?

18 A. I mean, I think there probably is some
19 force there due to the threaded connection
20 depending on how tightly that is screwed down.

21 Q. Would a person of ordinary skill in the
22 art understand the crushing head via nut 34 exerts
23 torsional force on shaft 33 at the connection
24 between 33 and nut 34?

25 A. As we read, the Coxhill reference has an

1 antispin device to prevent undesired spinning of
2 the crushing head, so I would not think that it was
3 transferring torsional forces.

4 Q. Okay. And would a person of ordinary
5 skill in the art understand that the crushing head
6 via nut 34 exerts bending forces on shaft 33 at the
7 connection between 33, shaft 33 and nut 34?

8 A. Again, this is hard to say without doing
9 a full analysis. I mean, I expect there are
10 bending forces or bending stresses in the shaft due
11 to the force on the crushing head. Whether those
12 are transferred directly from the crushing head to
13 the shaft, that seems more likely to me than they
14 are all transferred through the nut and the
15 threaded connection. Could there be some? Maybe,
16 possibly, but I really don't know without doing a
17 full analysis.

18 Q. Mr. Smith, would a person of ordinary
19 skill in the art understand that whatever forces
20 are being exerted on the shaft via crushing head
21 through nut 34 would result in failure of the shaft
22 33?

23 A. I haven't seen anything in Coxhill that
24 would suggest that this invention is prone to
25 failure. I would think it's been designed in a way

1 that it works properly.

2 Q. Okay. So you mentioned that Coxhill has
3 an antispin device.

4 What's the purpose of the antispin
5 device?

6 A. So if we look at Column 3, Line 37, "As
7 previously mentioned, the gyratory crusher 10 is
8 provided with an antispin device 45 to prevent
9 undersirable [sic] spinning of the crusher head
10 24."

11 Q. So based on that passage, Mr. Smith,
12 does the antispin device prevent undesirable
13 spinning of the crushing head 24 or does it
14 completely prevent spinning of the crusher head 24?

15 A. So it does talk about the antispin
16 device must allow for reverse rotation. So it
17 clearly doesn't eliminate all rotation but --
18 because it allows reverse rotation, for example, to
19 release stuck loads. But it does, as the patent
20 says, prevent undesirable spinning of the crusher
21 head.

22 Q. So based on that portion of the Coxhill
23 patent, would you now understand that the shaft 33
24 experiences torsional forces via nut 34 due to the
25 crushing head 24?

1 A. I don't see anything that would suggest
2 that that's due to the nut 34.

3 Q. I'm not sure I understand your answer,
4 Mr. Smith. So would shaft 33 -- strike that.

5 Would a person of ordinary skill in the
6 art looking at Figure 1 of the Coxhill patent
7 understand that shaft 33 experiences torsional
8 forces at the connection between shaft 33 and nut
9 34 due to the crushing head 24?

10 A. So as I said before, the antispin device
11 is to prevent undesirable motion of the crushing
12 head 24. There can be some reverse motion as
13 specified in the patent, but I don't think that
14 that would necessarily or even is implied to be
15 taken out by the nut 34.

16 Q. I guess I'm not following what you mean
17 by "I don't think that that would necessarily or
18 even is implied to be taken out by the nut 34."

19 A. Sure. Coxhill is designed so the
20 crusher head doesn't have undesirable rotation.
21 There can be some purposeful desired rotation, but
22 the antispin device, I think, is what would take
23 the torque or the torsional forces from the crusher
24 head to the shaft as opposed to the nut 34 taking
25 those forces.

1 Q. But as we discussed in that passage that
2 you were reading from at Column 3 in the Coxhill
3 patent, the antispin device allows for the shaft 33
4 to rotate, correct?

5 A. So if we look at the summary of the
6 invention, Column 1, approximately Line 43, "The
7 present invention includes among its objects the
8 provision of an improved means for an antispin
9 device where it is operable in all positions" --
10 sorry, "in all possible crusher head shaft
11 positions and allows for the reverse rotation of
12 the shaft under load."

13 So that doesn't say that the crusher
14 head is spinning on the shaft, just that the shaft
15 can reverse directions with the crusher head
16 attached.

17 Q. Let me ask you this question, Mr. Smith.
18 Earlier in today's deposition we talked about how
19 in gyratory crushers the shaft rotates
20 eccentrically along a longitudinal axis and then
21 rotates around itself.

22 Do you recall that?

23 A. I do.

24 Q. So the antispin device in the Coxhill
25 patent, is it directed to prevent the eccentric

1 spin or the spin of the shaft around itself?

2 A. That's not something that I've looked at
3 specifically before today. What it does say is
4 that it's provided with an antispin device to
5 prevent undesirable spinning of the crusher head.
6 I suppose I could go back and look at that and
7 figure out exactly what that means as it relates to
8 the different rotations. But that's not something
9 I specifically analyzed within Coxhill at this
10 point.

11 Q. Just taking a look at Figure 1, there is
12 a torsion rod 116; is that right?

13 A. Yes, that's correct.

14 Q. So wouldn't there have to be forces from
15 the crushing head being exerted through the nut 34
16 to the shaft 33 at the connection between shaft 33
17 and nut 34 for it to be received by the torsion rod
18 and implement the antispin device?

19 A. That's possible. Again, I am just going
20 off the words in the patent.

21 Q. Okay. Do you know, when does the
22 antispin device prevent the shaft from spinning?

23 A. Sorry, can you say the question one more
24 time?

25 Q. Sure. Do you know, when -- strike that.

1 When does the antispin device prevent
2 the shaft from spinning?

3 A. So looking at Column 4, starting around
4 Line 23, it talks about how it prevents it from
5 spinning during operation except when you need to
6 increase the distance between the crushing faces so
7 that material can flow through.

8 Q. And how is the antispin device 45
9 connected to the shaft 33 in Coxhill?

10 A. It looks like it's connected to the
11 shaft up towards the upper end of the shaft.

12 Q. What do you mean "connected to the
13 shaft"?

14 A. The antispin device is positioned
15 towards the upper end of the shaft. And I
16 apologize if there's a lot of noise. Right now
17 there is a Halloween party going on outside.

18 Q. Okay.

19 A. It's pretty loud in here so I'm assuming
20 some of it is coming through.

21 Q. It's okay at our end if it's okay with
22 you, Mr. Smith.

23 A. Yeah, it's okay with me. I just
24 apologize that that is happening right now.

25 Q. So I guess what I'm trying to understand

1 is, when you say the antispin device is positioned
2 towards the upper end of the shaft, is it within
3 the shaft 33?

4 A. It does look to be into a bore drilled
5 in the shaft.

6 Q. And is the torsion rod also bored into
7 the shaft?

8 A. I would say that the torsion rod is at
9 least partially within the bore of the shaft.

10 Q. You say "partially" because there's a
11 little portion of the torsion shaft that's sticking
12 out from the top of the shaft; is that correct?

13 A. Yes. There is a portion that is above
14 or outside of the shaft.

15 Q. Okay. Let me ask you, shifting gears, a
16 few questions regarding fatigue failure, Mr. Smith.

17 So how would a person of ordinary skill
18 in the art at the priority date of either the '568
19 patent or the '090 patent understand fatigue
20 failure?

21 A. So fatigue failure, a person of ordinary
22 skill in the art would have understood that to be
23 failure that occurs at high numbers of cycles and
24 that failure typically occurs at a lower stress
25 than would occur -- than the stress at which

1 failure would occur if there weren't such a large
2 number of cycles.

3 Q. Okay. And is fatigue a complicated
4 phenomenon from the perspective of a person of
5 ordinary skill in the art?

6 A. I think it is fairly well understood at
7 this point.

8 Q. Well, I want to direct you back to
9 either 2012 or 2014 timeframe, and you standing in
10 the shoes of a person of ordinary skill in the art
11 that you've defined earlier in the deposition
12 today. For that person, would fatigue be a
13 complicated phenomenon?

14 A. No, I don't think so. Fatigue is
15 something that is and has been covered in
16 mechanical engineering course work for an
17 undergraduate degree, at least when I did it back
18 in 2005-ish, and certainly before that too.

19 Q. Would it be fair to say that fatigue is
20 only partially understood as of, again, the 2012 to
21 2014 timeframe from the perspective of a person of
22 ordinary skill in the art?

23 A. I think that the -- generally in
24 mechanical engineering we don't always know why
25 things happen, but we have done testing and studies

1 that provide equations and ways of analyzing those
2 that are fairly well understood and accurate. And
3 to the extent that, you know, fatigue wasn't
4 completely understood as a whole, the equations and
5 analysis techniques that a person of ordinary skill
6 in the art would use were well understood at the
7 time.

8 Q. Okay. And would a person of ordinary
9 skill in the art, again, in the 2012 to 2014
10 timeframe, understand that fatigue failure would
11 give a warning?

12 A. Generally speaking, fatigue failures,
13 you may be able to see some cracking if you're
14 watching for it and if you're at the right number
15 of cycles. But generally speaking, I would think
16 that fatigue failure can come without warning.

17 Q. And would a person of ordinary skill in
18 the art in the 2012 to 2014 timeframe consider
19 fatigue failure to be dangerous?

20 A. I think any failure can be dangerous, so
21 sure, I believe fatigue failure can be dangerous.
22 I don't know that it is any more dangerous than any
23 other type of failure, but any failure can be
24 dangerous.

25 Q. And would a person of ordinary skill in

1 the art in the 2012 to 2014 timeframe understand
2 that fatigue failure can be sudden?

3 A. Sure, yeah, fatigue failure can be
4 sudden.

5 Q. Would a person of ordinary skill in the
6 art in the 2012 to 2014 timeframe understand that
7 fatigue failure can be total?

8 A. What do you mean "can be total"?

9 Q. For example, a total failure of the part
10 at issue.

11 A. Yes. Yeah, fatigue failure can
12 certainly destroy a whole part or a whole part can
13 fail.

14 Q. Would a person of ordinary skill in the
15 art in the 2012 to 2014 timeframe understand that
16 when a gyratory -- strike that.

17 Would a person of ordinary skill in the
18 art in the 2012 to 2014 timeframe understand that a
19 shaft in a gyratory crusher that fails will result
20 in large expense?

21 A. I would expect so.

22 Q. And would a person of ordinary skill in
23 the art in the 2012 to 2014 timeframe understand
24 that if a shaft in a gyratory crusher fails that
25 that may create an unsafe condition?

1 A. I suppose that it could. I don't know
2 exactly what that would be, but it certainly could.

3 Q. Okay. Would a person of ordinary skill
4 in the art in the 2012 to 2014 timeframe understand
5 that a shaft for a gyratory crusher with oil
6 grooves is harder to manufacture than compared to a
7 shaft without grooves?

8 A. I would say that it's an extra step in
9 the manufacturing process, so I would say it
10 requires more work. I don't know that that work is
11 any harder than any of the other steps in the
12 manufacturing process, but it is an extra step.

13 Q. Would a person of ordinary skill in the
14 art in the 2012 to 2014 timeframe understand that a
15 groove in a gyratory crusher shaft would change the
16 cross section of the shaft?

17 A. The location of the groove, I guess it
18 depends on which cross section of the shaft that
19 you're taking.

20 Q. So can you explain that for me?

21 A. Sure. If you take a cross section of a
22 shaft above the groove or below the groove, it may
23 not change that cross section. If you take a cross
24 section that goes through a groove, whether it's
25 horizontal or vertical, then that would probably

1 change the cross section.

2 Q. Okay. So taking that latter situation
3 where you are taking the cross section that goes
4 through the groove either horizontally or
5 vertically, would that change in the cross section
6 be rapid?

7 A. I guess it depends on how you designed
8 the groove.

9 Q. Well, let me ask you, is the depth of a
10 groove similar to the depth of a thread?

11 A. I suppose they could be. They certainly
12 don't have to be. Threads come in all sorts of
13 different sizes and so do grooves. So I assume
14 there are probably some instances where the sizes
15 of those line up.

16 Q. Let me ask you in the context of a
17 gyratory crusher. For example, we've looked at a
18 few references that have nuts engaging in a
19 threaded fashion, and we've discussed, at least in
20 the context of the '090 patent, grooves.

21 So in the context of a gyratory crusher,
22 would the depth of a groove be similar in size to
23 the depth of a thread?

24 A. Again, I don't think I have enough
25 information to compare those. I mean, threads are

1 often -- the size of threads is often correlated to
2 the diameter of the thing that they are on. So a
3 larger diameter would usually have deeper threads,
4 a smaller diameter would have shallower threads.

5 As to how deep the oil grooves are, in
6 the instances that I've seen oil grooves, I've seen
7 some that are deeper than small threads and I have
8 seen some that are smaller than large threads. So
9 I'm not sure how to answer your question.

10 Q. All right. Well, you have the Polinski
11 patent in front of you, correct?

12 A. I do, yes.

13 Q. Actually, strike that.

14 You have the Coxhill patent in front of
15 you, correct?

16 A. I do.

17 Q. So we have been speaking about the
18 threaded engagement of nut 34 to shaft 33.

19 Do you recall that?

20 A. I do.

21 Q. Strike that.

22 What would you say is the typical depth
23 of the threads for that type of engagement?

24 A. I couldn't even approximate that. It
25 really depends. It could be -- it could vary

1 widely.

2 Q. All right. Let me place in front of you
3 another exhibit here. Let me know when you have
4 the exhibit in front of you. It's Exhibit 1033
5 previously marked in the 01381 proceeding.

6 (Deposition Exhibit No. 1033 marked.)

7 THE WITNESS: Okay.

8 Q. BY MR. ARJOMAND: Do you recognize this
9 document?

10 A. I do.

11 Q. And what is it?

12 A. It is U.S. Patent 2,480,399 to Harless.

13 Q. And you have studied this patent,
14 Mr. Smith?

15 A. I have read it, yes.

16 Q. And you have read it in its entirety?

17 A. I have.

18 Q. And you're familiar with its contents?

19 A. Generally speaking.

20 Q. And would it be your opinion that
21 Harless discloses a groove 12 on its shaft 1 in
22 Figure 1? I should say it's shaft 2.

23 A. Yes. With that correction there is a
24 groove 12 on shaft 2.

25 Q. So now taking a look at Harless Figure

1 1, specifically groove 12, in connection with
2 Coxhill and its threaded connection between the nut
3 34 and the shaft 33, would your opinion be that the
4 depth of the groove in Harless and the depth of the
5 threads in Coxhill are the same in depth?

6 A. I would be very surprised if they were
7 exactly the same.

8 Q. Would they be roughly the same?

9 A. Just based on patent figures, it's
10 really hard to tell given that they may or may not
11 be drawn to scale. And I think we can say that
12 they're probably within the same order of
13 magnitude. You're not going to have an oil groove
14 that's five inches deep when you have a thread
15 that's a 16th of an inch deep or an 8th of an inch
16 deep. But, you know, you might have a groove
17 that's twice the depth of a thread or you might
18 have threads that are twice the depth of a groove.

19 Q. I'm asking you based on your knowledge
20 as an expert what your understanding would be as to
21 the comparative depth of groove 12 of Figure 1 of
22 Harless and the threaded engagement 34 and 33 in
23 Figure 1 of Coxhill.

24 A. Just looking at the patent figures I
25 can't with any certainty tell you which one is

1 bigger and which one is smaller. There's a lot
2 that goes into that. There are no dimensions on
3 these drawings. They may not even be drawn to
4 scale. They're certainly not the same scale. The
5 crusher is probably significantly larger than --
6 the overall crusher is probably bigger than this
7 portion of Harless we are looking at.

8 So it's really hard to compare and
9 understand with any certainty whether the groove is
10 larger or smaller than the threads if these were
11 converted to commercial embodiments or physical
12 embodiments.

13 Q. I am not asking you, Mr. Smith, to make
14 an analysis based on the figures. I am asking you
15 to make an assessment based on your understanding
16 as an expert. You hold yourself out to be an
17 expert in this field, so you, in my opinion,
18 probably have a sense of what the depth of the
19 threads would be for the Coxhill engagement between
20 nut 34 and shaft 33, and the same would go for the
21 groove 12 in Harless.

22 So I'm asking you based on your
23 experience as an expert, what would their
24 comparative depths be in your opinion?

25 A. Again, it's really difficult to compare

1 those. Could I see an oil groove being twice as
2 deep as a thread? Yes. Could I see a thread being
3 twice as deep as an oil groove? Yes. Could I see
4 an oil groove being 10 times as deep as a thread?
5 Probably not. Beyond that I'm not really sure how
6 to answer your question.

7 Q. Okay. We have been going about an hour.
8 Let's take a break.

9 (Break taken from 1:59 p.m. to 2:12 p.m.)

10 Q. BY MR. ARJOMAND: Mr. Smith, I wanted to
11 ask you, have you reviewed the Shigley textbook?

12 A. So the Shigley textbook is one that I
13 used during my undergraduate degree, and it's
14 something that I have in my office and reference
15 regularly.

16 Q. Let me see if I can be a little more
17 specific. The petitioner submitted the entire
18 Shigley textbook in the 01381 proceeding and marked
19 it as Exhibit 1049. And that textbook is
20 "Shigley's Mechanical Engineering Design 9th
21 Edition."

22 Is that the textbook that you were
23 referring to in your previous answer?

24 A. So we have multiple editions floating
25 around our office. I know I have used and relied

1 on the 9th edition and I probably have an earlier
2 edition as well.

3 Q. I want to save some trees and not submit
4 the entire Shigley exhibit in this proceeding,
5 specifically in this deposition. So would you be
6 okay if I asked you some general questions about
7 the Shigley textbook? Obviously, if you have to or
8 you want to review the textbook, we can certainly
9 submit it and provide you a copy for your answers.

10 A. Okay. We will see how we can do that.

11 Q. Do you recall how much time you spent
12 reviewing the Shigley Exhibit 1049 in the 01381
13 proceeding?

14 A. Not specifically.

15 Q. Do you have a ballpark sense?

16 A. It was probably a couple of hours.

17 Q. And those would be -- those hours would
18 be since June 11th, 2025, when we took your first
19 deposition?

20 A. I expect so.

21 Q. And as I mentioned, petitioner submitted
22 the entire textbook.

23 Did you read the entire textbook,
24 Mr. Smith?

25 A. I have been through the entire textbook.

1 I didn't read the entire textbook for purposes of
2 this declaration.

3 Q. "This declaration" being your second
4 declaration in both proceedings?

5 A. Yes.

6 Q. Yeah. I should add that the entire
7 Shigley textbook was also submitted as Exhibit 1047
8 in the 01380 proceeding.

9 So would a person of ordinary skill in
10 the art in your opinion have knowledge of the
11 Shigley textbook?

12 A. My understanding is that a person of
13 ordinary skill in the art has an understanding of
14 all of the relevant prior art, and I think that
15 Shigley is certainly pertinent and relevant here.

16 Q. Okay. So it's your position that a
17 person of ordinary skill in the art in the
18 timeframe of 2012 to 2014 would have knowledge of
19 all of the chapters of the Shigley textbook that's
20 been submitted in these proceedings?

21 A. I believe so.

22 Q. And previously we discussed whether a
23 groove could cause a change in the cross section of
24 a shaft if the cross section is taken across the
25 groove either horizontally or vertically.

1 Do you recall that?

2 A. I do.

3 Q. Would a person of ordinary skill in the
4 art 2012 to 2014 timeframe understand that a rapid
5 change in cross section would precipitate fatigue
6 failure?

7 A. What do you mean "precipitate fatigue
8 failure"?

9 Q. Trigger.

10 A. I would expect that there are instances
11 where it could trigger or precipitate fatigue
12 failure, but there are also instances where it
13 would not.

14 Q. Okay. What instances would it trigger
15 fatigue failure in your opinion?

16 A. So if the stress at that area is above
17 the fatigue stress limit, then I would expect that
18 it would fail at a certain number of cycles
19 correlating to that higher stress or that lower
20 fatigue limit. As the same as any other type of
21 failure when you exceed the strength of the
22 material, when the stress exceeds the strength of
23 material you get a failure. And fatigue -- in
24 fatigue situations where you have stress
25 concentrations you have either higher stresses or

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1 lower fatigue stress in that area, and if not
2 designed properly, it can lead to failure.

3 Q. Any other instances that would trigger
4 fatigue failure, in your opinion?

5 A. Other than the stress being above the
6 fatigue stress limit, I don't think so.

7 Q. Okay. So let me shift gears here a bit,
8 Mr. Smith. Did you review the prosecution history
9 of the '090 patent?

10 A. I did at some point, yeah.

11 Q. When you say at one point, did you
12 review the prosecution history before you prepared
13 your initial declaration in the 01381 proceeding?

14 A. I did.

15 Q. Do you recall if you reviewed the
16 prosecution history of the '090 patent before you
17 prepared your second declaration in the 01381
18 proceeding?

19 A. I don't think I specifically looked at
20 it in preparing my second declaration.

21 Q. So in your second declaration in the --
22 strike that.

23 In your second declaration in the 01381
24 proceeding, you provide your analysis of how the
25 term "end" should be construed.

1 Do you recall that?

2 A. I do.

3 Q. And in that portion of your declaration
4 you talk about the end of a novel.

5 Do you recall that?

6 A. I do, as one of a number of colloquial
7 uses of the term.

8 Q. Right. So would you understand that the
9 end of the novel includes the last page?

10 A. I would say that it includes the last
11 page and probably several pages or a chapter before
12 that.

13 Q. Okay. So let me direct you to Figure 3
14 of the '090 patent. Let me know when you're there.

15 A. Okay.

16 Q. So I'm taking a look at Column 4 of the
17 '090 patent at Lines 34 to 35. It says, "FIG. 3 is
18 a prospective partial cross section of the shaft
19 upper end of FIG. 2 with the protective sleeve
20 removed."

21 Do you see that?

22 A. Sorry, where was it again? I was
23 looking at the figure.

24 Q. You know what? Let me just go at it
25 this way.

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1 Do you understand Figure 3 to be an
2 illustration of the shaft of the -- strike that.

3 Do you understand Figure 3 of the '090
4 patent to be an illustration of a portion of the
5 shaft with the sleeve removed?

6 A. I think that's reasonable.

7 Q. Okay. And just to orient you, reference
8 number 123 is referred to as the upper end surface
9 in Figure 3.

10 Do you see that?

11 A. Okay.

12 Q. And upper most end 301 is at the top
13 left.

14 Do you see that?

15 A. I do.

16 Q. And there's an axial region 113 that is
17 referenced in Figure 3.

18 Do you see that?

19 A. What was it again?

20 Q. Axial region 113. Or sometimes it's
21 referred to as conical region 113.

22 Do you see that?

23 A. Sometimes it's referred to as a first
24 axial upper end region 113 or upper end region 113?

25 Q. Yes. Yes.

1 Do you see that?

2 A. I do.

3 Q. So what would you -- strike that.

4 Where would you say is the end of the --
5 strike that.

6 Where would you say is the upper end of
7 the axial region 113 in Figure 3?

8 A. Say that again?

9 Q. Yeah, that wasn't a very good question.

10 So where would you say is the end of
11 conical region 113 in Figure 3 of the '090 patent?

12 A. Where is the very end of the end region,
13 is that what you're asking?

14 Q. I'm asking you where is the end of the
15 conical region 113 in Figure 3 of the '090 patent?

16 A. So as we just discussed, 113 is referred
17 to several different ways, including end region.
18 If you're looking for the very end of it, you're
19 probably looking at surface 123. But again, the
20 patent refers to that whole region as an end
21 region.

22 Q. So would the end region necessarily
23 include the upper end surface 123?

24 A. I think that's reasonable.

25 Q. In your declaration for the '090 patent,

1 you construed the term "end" and "indented at" in
2 the claims of the '090 patent; is that correct?

3 A. Again, I don't have this up in front of
4 me, but there were several terms that I explained
5 how a person of ordinary skill in the art would
6 understand the term based on the intrinsic evidence
7 and extrinsic evidence.

8 Q. Okay. And do you recall if you used the
9 broadest reasonable interpretation for your claimed
10 construction analysis in Exhibit 1002 in the 01381
11 proceeding?

12 A. So my recollection is that I used the --
13 that I interpreted as a person of ordinary skill in
14 the art would understand it at the time of the
15 invention in light of the specification and file
16 history.

17 Q. So did you use the broadest reasonable
18 interpretation for your claimed construction
19 analysis in Exhibit 1002 in the 01381 proceeding?

20 A. No, I didn't use the broadest reasonable
21 interpretation standard for my description of
22 claimed construction or how a person of ordinary
23 skill in the art would understand the terms. I
24 used the Phillips standard, which is how a person
25 of ordinary skill in the art would understand the

1 terms at the time of the invention in light of the
2 specification.

3 Q. Okay. All right. Let's go off the
4 record.

5 (Break taken from 2:30 p.m. to 2:45 p.m.)

6 MR. ARJOMAND: We have no further questions
7 on cross-examination. We pass the witness to you,
8 Terry. We reserve our right to recross, if you
9 have any redirect.

10 MR. SANKS: I have no cross.

11 MR. ARJOMAND: All right. Well then, that
12 ends the deposition.

13 Thank you, Mr. Smith, for taking the
14 time to answer our questions today.

15 THE WITNESS: Absolutely.

16 THE STENOGRAPHER: Mr. Sanks, would you like
17 a copy of the transcript?

18 MR. SANKS: Yes. We would like to read.

19 THE STENOGRAPHER: And would you like your
20 copy of the transcript expedited and to you by
21 Monday as well?

22 MR. SANKS: Yes.

23 (The deposition concluded at 2:47 p.m.)

24 * * *

25 (Signature was requested.)

REPORTER'S CERTIFICATE

STATE OF IDAHO)
) ss.
COUNTY OF ADA)

I, VANESSA S. GOSNEY, Certified Shorthand Reporter
and Notary Public in and for the State of Idaho, do
hereby certify:

That prior to being examined, the witness named in
the foregoing deposition was by me duly sworn to testify
to the truth, the whole truth and nothing but the truth;

That said deposition was taken down by me in
shorthand at the time and place therein named and
thereafter reduced to typewriting under my direction,
and that the foregoing transcript contains a full, true
and verbatim record of said deposition.

I further certify that I have no interest in the
event of the action.

WITNESS my hand and seal this 27th day of October,
2025.



VANESSA S. GOSNEY

RPR and Notary, Public in and for the
State of Idaho.

My Commission Expires: 10-29-31

1 Terry Sanks

2 tsanks@firstinlaw.com

3 October 27, 2025

4 RE: CMS Cepcor v. Sandvik Intellectual Property AB

5 10/24/2025, David Smith, (#7676141).

6 The above-referenced transcript has been

7 completed by Veritext Legal Solutions and

8 review of the transcript is being handled as follows:

9 ___ Per CA State Code (CCP 2025.520 (a)-(e)) - Contact Veritext
10 to schedule a time to review the original transcript at
11 a Veritext office.

12 ___ Per CA State Code (CCP 2025.520 (a)-(e)) - Locked .PDF
13 Transcript - The witness should review the transcript and
14 make any necessary corrections on the errata pages included
15 below, notating the page and line number of the corrections.
16 The witness should then sign and date the errata and penalty
17 of perjury pages and return the completed pages to all
18 appearing counsel within the period of time determined at
19 the deposition or provided by the Code of Civil Procedure.
20 Contact Veritext when the sealed original is required.

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22 Counsel - Original transcript to be released for signature
23 as determined at the deposition.

24 ___ Signature Waived - Reading & Signature was waived at the
25 time of the deposition.

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3 make any necessary corrections on the errata pages included
4 below, notating the page and line number of the corrections.
5 The witness should then sign and date the errata and penalty
6 of perjury pages and return the completed pages to all
7 appearing counsel within the period of time determined at
8 the deposition or provided by the Federal Rules.
9 ___ Federal R&S Not Requested - Reading & Signature was not
10 requested before the completion of the deposition.

1 CMS Cepcor v. Sandvik Intellectual Property AB
2 David Smith (#7676141)

3 E R R A T A S H E E T

4 PAGE_____ LINE_____ CHANGE_____

5 _____

6 REASON_____

7 PAGE_____ LINE_____ CHANGE_____

8 _____

9 REASON_____

10 PAGE_____ LINE_____ CHANGE_____

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12 REASON_____

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16 PAGE_____ LINE_____ CHANGE_____

17 _____

18 REASON_____

19 PAGE_____ LINE_____ CHANGE_____

20 _____

21 REASON_____

22 _____

23 _____

24 (David Smith) Date

25

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1 CMS Cepcor v. Sandvik Intellectual Property AB

2 David Smith (#7676141)

3 ACKNOWLEDGEMENT OF DEPONENT

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

10
11 _____
12 David Smith

Date

13 *If notary is required

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15 _____ DAY OF _____, 20____.

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Federal Rules of Civil Procedure

Rule 30

(e) Review By the Witness; Changes.

(1) Review; Statement of Changes. On request by the deponent or a party before the deposition is completed, the deponent must be allowed 30 days after being notified by the officer that the transcript or recording is available in which:

(A) to review the transcript or recording; and

(B) if there are changes in form or substance, to sign a statement listing the changes and the reasons for making them.

(2) Changes Indicated in the Officer's Certificate.

The officer must note in the certificate prescribed by Rule 30(f)(1) whether a review was requested and, if so, must attach any changes the deponent makes during the 30-day period.

DISCLAIMER: THE FOREGOING FEDERAL PROCEDURE RULES ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. THE ABOVE RULES ARE CURRENT AS OF APRIL 1, 2019. PLEASE REFER TO THE APPLICABLE FEDERAL RULES OF CIVIL PROCEDURE FOR UP-TO-DATE INFORMATION.

VERITEXT LEGAL SOLUTIONS

COMPANY CERTIFICATE AND DISCLOSURE STATEMENT

Veritext Legal Solutions represents that the foregoing transcript is a true, correct and complete transcript of the colloquies, questions and answers as submitted by the court reporter. Veritext Legal Solutions further represents that the attached exhibits, if any, are true, correct and complete documents as submitted by the court reporter and/or attorneys in relation to this deposition and that the documents were processed in accordance with our litigation support and production standards.

Veritext Legal Solutions is committed to maintaining the confidentiality of client and witness information, in accordance with the regulations promulgated under the Health Insurance Portability and Accountability Act (HIPAA), as amended with respect to protected health information and the Gramm-Leach-Bliley Act, as amended, with respect to Personally Identifiable Information (PII). Physical transcripts and exhibits are managed under strict facility and personnel access controls. Electronic files of documents are stored in encrypted form and are transmitted in an encrypted

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