

In the Matter Of:
SOLARIS V MASABA

DR. ROBERT DURHAM

September 04, 2025

JD Legal Support
2901 W. Bluegrass Blvd., Ste. 200
Lehi, Utah 84043

1 IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

2 BEFORE THE PATENT TRIAL AND APPEAL BOARD

3

4 SOLARIS OILFIELD SITE SERVICES)

OPERATING, LLC, and SOLARIS)

5 OILFIELD SITE SERVICES)

PERSONNEL, LLC,)

6)

Petitioners,)

7)

v.) Case No. IPR2024-01179

8)

MASABA, INC.,) Patent No. 11,780,689

9)

Patent Owner.)

10 _____)

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13 VIDEOCONFERENCE DEPOSITION OF DR. ROBERT DURHAM

14 Thursday, September 4, 2025

15

* ALL PARTIES APPEARING VIA ZOOM *

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25 Reported by: Daren S. Bloxham, RPR No. 000335

1 Deposition of Dr. Robert Durham, witness being
2 located at Baker Botts, 901 Louisiana Street,
3 Houston, Texas, on September 4, 2025, at 10:00 a.m.
4 CT, before Daren S. Bloxham, Certified Court
5 Reporter, in and for the State of Utah.

6

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2 WITNESS: Dr. Robert Durham

3 EXAMINATION PAGE

4 By: Mr. Nydegger 4, 101

5 By: Ms. Flannery 93

6

7 EXHIBITS

8 NUMBER DESCRIPTION PAGE

9 (none)

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

2 --oOo--

3 DR. ROBERT DURHAM,

4 a witness herein, having been administered.

5 an oath, was examined and testified as follows.

6 EXAMINATION

7 BY MR. NYDEGGER:

8 Q. Good morning, Dr. Durham.

9 A. Good morning.

10 Q. Dr. Durham, is there anything that would
11 preclude you from giving full and complete testimony
12 this morning?

13 A. No.

14 Q. You aren't under the influence of any
15 substance, medications, you're not sleep deprived,
16 anything like that that could impede your ability to
17 provide full testimony today?

18 A. No, just Zyrtec.

19 Q. Thank you.

20 Dr. Durham, to your understanding, is the
21 level of skill of the art of a POSITA determined by
22 the claimed invention or by the disclosure of the
23 patent as a whole?

24 MS. FLANNERY: Object to form. Go ahead.

25 THE WITNESS: My understanding, it's the

1 disclosure of the specification -- the patent as a
2 whole, as well as the prior art. So it goes into the
3 rapidity with the innovations are made and the level
4 of skill of operators in the field all go into the
5 definition of POSITA.

6 Q. (By Mr. Nydegger) Okay. Let's take a
7 hypothetical. So assume that a patent claims a car
8 that uses hydrogen as fuel.

9 Do you understand that?

10 A. Okay.

11 Q. And assume that the specification discloses
12 that the car uses a semiconductor chip to control the
13 steering.

14 Do you understand that?

15 A. Okay.

16 Q. Would the skill of a POSITA in that
17 hypothetical be directed to a hydrogen-fueled engine
18 or to semiconductor chips?

19 MS. FLANNERY: Object to form.

20 THE WITNESS: I think -- I think it could
21 be either. It would depend on the entire
22 specification and the rest of the art and the people
23 in the field.

24 Q. (By Mr. Nydegger) Okay. Thank you.

25 And is that understanding that you

1 explained that the skill of art is based on the
2 specification as a whole, do you understand that you
3 used your opinion as to opine on the level of skill
4 of the art of a POSITA in this case?

5 MS. FLANNERY: Object to form.

6 THE WITNESS: Yes, as well as the art.
7 It's not just the specification itself, it's also the
8 rest of the art --

9 Q. (By Mr. Nydegger) Okay.

10 A. -- that's applicable.

11 Q. So it's your understanding that the level
12 of skill of the art of a POSITA is not governed by
13 the claims of the invention. Is that correct?

14 MS. FLANNERY: Object to form.

15 THE WITNESS: It's not solely governed by
16 the claims of the invention. It certainly goes into
17 it, but not solely governed by that.

18 Q. (By Mr. Nydegger) So if the specification
19 is much broader than the claims, then it's your
20 understanding that the level of skill of the art of a
21 POSITA would encompass the entire breadth of the
22 specification and not be limited to the subject
23 matter of the claims. Is that correct?

24 MS. FLANNERY: Object to form.

25 THE WITNESS: I say it could be, yes.

1 Q. (By Mr. Nydegger) Well, I'm asking not
2 what could be, I'm asking what your understanding is.
3 Either it is your understanding or it's not your
4 understanding.

5 A. That certainly is my understanding that it
6 is based and could be based on the entire
7 specification, as well as the rest of the art.

8 Q. Okay. And that's the understanding you
9 applied in this case, that you looked at the entire
10 specification to determine the skill of the art and
11 did not -- did not limit the level of skill in the
12 art in any way based on the actual claims of the '689
13 patent, correct?

14 MS. FLANNERY: Object to form.

15 THE WITNESS: I disagree with that
16 characterization.

17 Q. (By Mr. Nydegger) Okay. Well, what isn't
18 correct?

19 A. It's both the claims and the specification.
20 So yes, the claims go into that.

21 Q. Do you agree --

22 A. But it's not that simple.

23 Q. Do you agree that the specification of the
24 '689 patent discloses subject matter broader than
25 what is claimed?

1 A. Oh, certainly.

2 Q. And so my question is did you include those
3 broader disclosures in your definition of the skill
4 of a person of skill in the art of the '689 patent in
5 your opinion?

6 A. Yes. That goes into the -- to the analysis
7 of who a POSITA would be.

8 Q. Okay. Dr. Durham, how many different oil
9 or gas well sites have you personally seen with silos
10 at them?

11 A. Dozens.

12 Q. Okay. Is it your opinion that because belt
13 conveyors weigh more than discharge chutes that belt
14 conveyors are less susceptible to being blown into
15 unlevel positions by the wind?

16 MS. FLANNERY: Object to form.

17 THE WITNESS: Yes, that could be.

18 Q. (By Mr. Nydegger) It could be or it is?

19 A. Well --

20 Q. I'm asking what your opinion is, not what
21 your opinion could be. I'm asking what your opinion
22 is.

23 A. Right. Well, I would say with regard to
24 the configuration in this patent, then a heavier item
25 is less likely to be blown than a lighter item.

1 Q. So is it your opinion that because belt
2 conveyors weigh more than discharge chutes, they are
3 less susceptible to being blown into unlevel
4 positions by wind?

5 MS. FLANNERY: Object to form.

6 THE WITNESS: In this configuration, as I
7 stated in my declaration, I would agree with that.
8 Your question is much broader than that, so I can't
9 answer your broad question.

10 Q. (By Mr. Nydegger) Well, my question is
11 actually quoting your opinion at paragraph 48.

12 A. Right. So in context of paragraph 48, I
13 would agree with that.

14 Q. Okay. How much weight would be added in
15 comparison to a discharge chute by substituting, for
16 example, the discharge chute in Waldner with an
17 articulated belt conveyor like that of Dynatek?

18 A. I think we discussed this at some length in
19 my first deposition. That's greatly dependent on the
20 actual configuration. You're trading off a solid
21 chute or something with struts. So in that regard,
22 you're losing weight.

23 In the same manner, you're adding belts,
24 rollers or, perhaps, rollers, maybe some motors,
25 which would add weight. I think it's a case-by-case

1 analysis. Typically we would expect a belt conveyor
2 to be somewhat heavier than a chute, but I can't
3 answer with any particularity as a number.

4 Q. You haven't calculated that in this case?

5 A. No, it would greatly depend on -- on an
6 awful lot of factors.

7 Q. Why haven't you run that calculation?

8 A. Because it's too broad a calculation to run
9 with any effectiveness.

10 Q. Is it fair to say that the information is
11 not available to be able to run that calculation?

12 MS. FLANNERY: Object to form.

13 THE WITNESS: In the -- in the way you ask
14 the question, that's correct. The information --
15 well, I would say it's not the information is not
16 available, I would say the question is too broad to
17 answer with any specificity.

18 Q. (By Mr. Nydegger) Okay. When you -- you
19 do have that information available to you?

20 A. No, I would say the information could be
21 available. You could go out and do a survey of all
22 conveyors and get a range. You could do a survey of
23 all chutes and get a range. But the information, to
24 answer your question, it's much too broad to answer
25 the question the way you asked.

1 Q. Okay. So -- so the information could be
2 obtained, but the information has not been provided
3 in this case. Is that correct?

4 A. Correct. I did not do a survey of all
5 chutes and what they may or may not weigh. I did not
6 do a survey of all articulated conveyor systems and
7 what they may or may not weigh.

8 Q. Okay. Did you calculate the wind loads of
9 the Econoloader?

10 A. No.

11 Q. Why not?

12 A. It wasn't necessary for me to understand
13 the claims.

14 Q. And do you have the information available
15 to be able to do that?

16 MS. FLANNERY: Object to form.

17 THE WITNESS: Not at hand, no.

18 Q. (By Mr. Nydegger) To your knowledge, has
19 that information been provided in the case?

20 A. To my knowledge, it has not.

21 Q. Have you discussed with the petitioner in
22 this case whether any of your expert opinions have
23 ever been excluded?

24 A. The petitioner, no.

25 Q. What are the measurements of the Dynatek

1 Econoloader? Have you seen those in this case?

2 A. I would have to look at the exhibits to see
3 if those measurements were on the -- on the Dynatek
4 exhibit in order to answer that question. Some of
5 the dimensions were available, yes. Some I think
6 were not.

7 Q. Have you reviewed the petitioner's reply
8 brief in this case?

9 A. I did read through it, yes.

10 Q. If you could go -- do you have that
11 available?

12 A. I do not.

13 MR. NYDEGGER: I don't know if this will
14 allow me to drop that. Can we go off the record for
15 one minute, please?

16 (A discussion was had off the record.)

17 Q. (By Mr. Nydegger) Dr. Durham, you have the
18 petitioner's reply brief, filed in this case, before
19 you, correct?

20 A. I do.

21 Q. If you could go to page 15, please.

22 MS. FLANNERY: Chad, do you mean page 15 of
23 the PDF or 15 of the brief? Sorry. Just want to
24 make sure we're --

25 MR. NYDEGGER: Yes, it's page 15 of the

1 brief, page 28 of the PDF.

2 MS. FLANNERY: Okay. Great.

3 THE WITNESS: Yes, I'm there.

4 Q. (By Mr. Nydegger) All right. Do you see
5 the first full sentence on that page reads, "Using
6 the proper measurements in the Econoloader's two
7 pivot joints to reposition its arms, POSITAs could
8 have arranged those components to fit within a total
9 height of 11.5 to 12.5 feet."

10 Do you see that?

11 A. I see that.

12 Q. What are the proper measurements of the
13 Econoloader's two pivot joints -- sorry -- the proper
14 measurements referred to there? Okay. Do you know
15 what the proper measurements are of the Econoloader?

16 MS. FLANNERY: Object to form.

17 THE WITNESS: I think -- well, we'll turn
18 to page 53 of my declaration. I think I state there
19 my calculations, which are maybe somewhat different
20 than this, use Mr. Anderson's calculations and
21 assumptions for that, and I don't recall what those
22 are right now.

23 Q. (By Mr. Nydegger) You're referring to
24 paragraph which, 53?

25 A. 53 is where I address those calculations

1 that I did. And I used Mr. Anderson's -- other than
2 having them stacked and his dimensions of the -- of
3 the ramps, I used his other dimensions. So whatever
4 assumptions that Mr. Anderson made were the same
5 assumptions I made in the calculation.

6 Q. Well, but you see the petition there where
7 we just read, they're arguing that those -- that
8 Mr. Anderson's measurements were -- were not the
9 proper measurements?

10 MS. FLANNERY: Object to form.

11 THE WITNESS: I can't speak to the -- to
12 the reply brief. I wasn't responsible for that.

13 Q. (By Mr. Nydegger) Okay. And so you don't
14 know what proper measurements are being referred to
15 here?

16 A. No. I didn't write this.

17 Q. Okay. Do you see the footnote 10 in that
18 sentence?

19 A. Yes.

20 Q. It refers -- do you see down in that
21 footnote 10, it refers to your declaration,
22 Exhibit 1110? Do you see that?

23 A. Right. Yes. With regard to the way it
24 folds, yes, I agree with that.

25 Q. Do you have an opinion concerning the

1 accuracy of Mr. Anderson's measurements concerning
2 the Econoloader?

3 MS. FLANNERY: Object to form.

4 THE WITNESS: No. I used his assumptions.

5 Q. (By Mr. Nydegger) Okay. Going back to
6 your supplemental declaration, if you look at
7 paragraphs 3 and 4, this is where you list materials
8 that you considered in drafting your supplemental
9 report. Is that correct?

10 A. Declaration, yes, sir.

11 Q. Did you rely on the declaration of
12 Mr. Smith?

13 A. No. I didn't see Mr. Smith's declaration
14 until I started prep.

15 Q. Okay. Are you aware that there are
16 significant portions of your declaration that are
17 verbatim the same as Mr. Smith's declaration?

18 MS. FLANNERY: Object to form.

19 THE WITNESS: I notice that there are quite
20 a few similarities, yes.

21 Q. (By Mr. Nydegger) Well, not just
22 similarities, but verbatim copying.

23 MS. FLANNERY: Object to form.

24 Q. (By Mr. Nydegger) Are you aware of that?

25 A. I disagree with that because unless

1 Mr. Smith copied mine, I disagree because I never saw
2 his.

3 Q. Okay. So if we look at your paragraph 50,
4 for example.

5 A. Okay.

6 Q. I'll represent to you that your paragraph
7 50, large sections -- several sentences in paragraph
8 50 are verbatim the same as paragraph 86 of the --

9 MR. NYDEGGER: Is it Dr. Smith or
10 Mr. Smith? I'm sorry, Liz.

11 MS. FLANNERY: I think it's Mr. Smith, but
12 we'll find out next week, I guess.

13 Q. (By Mr. Nydegger) Okay. We'll go with
14 Mr. Smith.

15 So going back to my question. I'll
16 represent to you that several sentences in your
17 paragraph 50 are verbatim the same as sentences in
18 Mr. Smith's declaration at paragraph 86.

19 And so is it correct that -- did you write
20 paragraph 50?

21 MS. FLANNERY: Object to form.

22 THE WITNESS: Either I wrote it or it's the
23 result of my discussions back and forth with counsel.
24 I'm certain I made adjustments to it. But if --
25 whether I authored 50 initially or whether I edited

1 it and revised it, I don't recall. It's been too
2 long.

3 Q. (By Mr. Nydegger) So is it correct that
4 you don't know whether paragraph 50 -- portions of
5 paragraph 50 were copied verbatim from Mr. Smith's
6 declaration?

7 MS. FLANNERY: Object to form.

8 Q. (By Mr. Nydegger) I'll let you answer that
9 question first.

10 A. I certainly didn't copy them because I
11 wasn't even aware that Mr. Smith was part of the case
12 until I started my -- my prep for this deposition.
13 But to the extent that the same information ended up
14 in the same declarations, that's not a surprise to me
15 since it's accurate information.

16 Q. It's not a surprise that it's verbatim the
17 same?

18 A. I can't -- I can't answer that. I know I
19 didn't copy it from Mr. Smith.

20 Q. To your understanding, can commercial
21 success relevant for secondary considerations of
22 non-obviousness be linked to the benefits provided by
23 the claimed elements?

24 MS. FLANNERY: Object to form.

25 THE WITNESS: It can be if there's nexus.

1 Q. (By Mr. Nydegger) That goes to my
2 question.

3 Is it your understanding that that nexus
4 that you just referenced must be directly linked to
5 the claim elements themselves, or can that nexus be
6 linked to the benefits that are provided by the claim
7 elements?

8 MS. FLANNERY: Object to form.

9 THE WITNESS: In my understanding that it
10 has to -- it has -- excuse me. It has to be linked
11 to the benefits provided by the claimed elements, and
12 the claimed elements have to be there in order to
13 provide those benefits. And further, that nexus is
14 not, to my understanding, related to non-novel
15 portions of the claimed elements.

16 Q. (By Mr. Nydegger) Okay. To your
17 understanding, can the link -- the required link for
18 commercial success be to dependent claims only?

19 A. Sure. Can be.

20 Q. Did you analyze in rendering your opinion
21 whether commercial success was linked to any
22 dependent claims?

23 A. My analysis was limited to the information
24 that was provided by Masaba as to what -- what that
25 commercial success claims were. So I analyzed

1 those -- that information. I did not do an
2 independent analysis or independent -- require
3 infringement analysis to start with, did not perform
4 that function.

5 Q. So in paragraph 7 of your report, you
6 discuss the commercial success nexus. Is that
7 correct?

8 A. I can review that. Yes, I do some of that
9 in paragraph 7.

10 Q. And if you look on -- at the top of page 5.

11 A. Uh-huh (affirmative).

12 Q. The first full sentence of paragraph 7 on
13 the top of that page reads, "The only features of the
14 '689 patent's independent claims that are even
15 arguably not disclosed in Waldner relate to the
16 configurations of the extension conveyor, king pin,
17 landing leg, and lift arm structures.

18 "None of the praise or commercial success
19 of Solaris's top-fill systems appears to be linked to
20 those features. Therefore, in my opinion, Solaris's
21 praise and commercial successful of its top-fill
22 system does not have nexus to the '689 patent
23 claims."

24 Did I read that correctly?

25 A. Yes.

1 Q. So your opinion only considered the
2 independent claims. Is that correct?

3 A. That's what I'm addressing in that
4 sentence. And as I recall, the only information
5 provided by Masaba related to the independent claims.

6 Q. So my question is did you consider any
7 nexus of commercial success commercial to be
8 dependent claims?

9 MS. FLANNERY: Object to form.

10 THE WITNESS: I did not because that was
11 not information provided by Masaba. I did not do an
12 independent analysis. Furthermore, if the nexus is
13 missing from the independent claims, in other words,
14 the commercial successes related to items that were
15 in the prior art, then that would still apply to the
16 dependent claims.

17 Q. (By Mr. Nydegger) All right. Move to
18 strike everything after "I did not" as nonresponsive.

19 Now, you state that, "The ability to use
20 belly dump trucks to fill silos was known in the art
21 before to the '689 patent," correct?

22 A. Yes.

23 Q. Well, if that was known in the prior art,
24 then why was that touted by Solaris --

25 MS. FLANNERY: Object to form.

1 Q. (By Mr. Nydegger) -- as providing
2 commercial success?

3 MS. FLANNERY: Object to form.

4 THE WITNESS: I can't speak to why Solaris
5 made any particular statements.

6 Q. (By Mr. Nydegger) You don't know. Is that
7 correct?

8 A. Yeah, I don't know.

9 Q. So if such belly dump-capable systems were
10 already available, why didn't Solaris use one of
11 those systems rather than going through the time and
12 effort and expense to commission the design of an
13 entire new system?

14 MS. FLANNERY: Object to form.

15 THE WITNESS: I can't answer as to why
16 Solaris made any decisions.

17 Q. (By Mr. Nydegger) Okay. You don't know?

18 A. No, I don't know.

19 Q. Do you opine that Solaris's system falls
20 outside the claims of the '689 patent?

21 A. I haven't performed any kind of
22 infringement analysis to be able to answer that
23 question. I don't know.

24 Q. Okay. To your understanding, did Solaris
25 express skepticism in the oil field about the use of

1 bucket elevators?

2 A. I remember that the claim was made. Don't
3 think I opine on that.

4 Q. Did you talk to anyone at Solaris about
5 whether they expressed skepticism about bucket
6 elevators in the oil field industry?

7 A. No, I've had no conversations with anyone
8 at Solaris.

9 Q. You mentioned a moment ago that you don't
10 believe you opined regarding Solaris's skepticism.
11 Is that correct?

12 A. I don't believe that I opined either way
13 that they did. I think I stated that patent owner
14 asserts that they did.

15 Q. Okay.

16 A. But I didn't opine as to that.

17 Q. Okay. You opined that -- that there are
18 numerous prior art references, including Walder and
19 Sleeman, that used bucket elevators to elevate
20 particulate material to an elevated location,
21 correct?

22 A. Yes, in paragraph 10.

23 Q. Are you aware of whether those systems
24 encountered any problems that might have led to
25 skepticism in the oil field industry concerning the

1 use of bucket elevators?

2 MS. FLANNERY: Object to form.

3 THE WITNESS: No, I don't have any
4 information about that.

5 Q. (By Mr. Nydegger) Do you have any
6 understanding or opinion as to what features
7 Solaris's alleged skepticism is linked to other than
8 bucket elevators?

9 MS. FLANNERY: Object to form.

10 THE WITNESS: No. I can't speak -- I
11 didn't perform any analysis about that, and I haven't
12 had any conversations with Solaris.

13 Q. (By Mr. Nydegger) Well, is it correct then
14 that the fact that bucket elevators may have been
15 available in the prior art has no bearing on whether
16 Solaris expressed skepticism about the use of bucket
17 elevators in the oil field industry?

18 MS. FLANNERY: Object to form.

19 THE WITNESS: Can you repeat that question?
20 I think I got lost in the middle.

21 Q. (By Mr. Nydegger) Sure. Do you have --
22 well, no.

23 MR. NYDEGGER: Actually, Daren could you
24 read it back for me, please.

25 (The following was read by the reporter:

1 "Well, is it correct then that the fact
2 that bucket elevators may have been
3 available in the prior art has no bearing
4 on whether Solaris expressed skepticism
5 about the use of bucket elevators in the
6 oil field industry?")

7 THE WITNESS: I think there are two
8 separate things. What's available in the prior art
9 is what's written in the prior art. Whether or not
10 they express skepticism, I state the patent owner
11 asserts that, and I address that by looking at the
12 prior art. They're two separate things to me.

13 Q. (By Mr. Nydegger) Well, explain to me the
14 link between what's in the prior art and whether
15 Solaris was skeptical about bucket elevators being
16 used in the oil field industry?

17 MS. FLANNERY: Object to form.

18 THE WITNESS: I don't know that there is a
19 link. I'm simply addressing patent owner's
20 assertions and whether or not that is indicative of a
21 secondary indicia of non-obviousness is what I'm
22 addressing.

23 Q. (By Mr. Nydegger) Well, could it be --

24 A. I'm not addressing -- go ahead.

25 Q. Please finish.

1 A. I'm not addressing whether or not Solaris
2 made the statements. I said I haven't done any
3 analysis of it. I'm simply addressing whether or
4 not -- if that statement was made, whether or not
5 that is indicative of a secondary indicia of
6 non-obviousness. That's what I'm addressing in
7 paragraph 10 and others.

8 Q. I'm trying to understand the basis for
9 that.

10 Is it possible that the fact that bucket
11 elevators had been tried in the oil field industry,
12 that that is what led to Solaris's skepticism because
13 others had tried, and those devices had problems?

14 A. I can't speak to what Solaris thought or
15 said or why they said it at all.

16 Q. I'm not asking if it's possible.

17 A. I can't speak to that. It would be
18 complete speculation on my part.

19 Q. So you don't know whether that's even
20 possible?

21 A. Right. It would be complete speculation.
22 I'm simply making a statement without any substance
23 whatsoever to back it up.

24 Q. I believe earlier you testified you have
25 not spoken with anyone at Solaris, correct?

1 A. That's correct.

2 Q. So is it correct that you haven't talked to
3 anyone at Solaris about whether they copied the
4 Masaba system?

5 A. I think that's a logical assumption, yes.

6 Q. Can you name for me all the substantial
7 differences in the design of the Masaba system and
8 the Solaris system that you're aware of?

9 MS. FLANNERY: Object to form.

10 THE WITNESS: I address, I think, one or
11 two of those, I think, in paragraph 11 and 12, maybe
12 one. So that's the only one I know of is the
13 difference in the ramps, the deployable ramps.

14 Q. (By Mr. Nydegger) So the only difference
15 you're aware of is that Masaba's system has a
16 deployable ramp attached, and Solaris's system does
17 not, correct?

18 A. Based on the information available. As I
19 said before, I have not done an infringement analysis
20 and have not been asked to do so or a
21 non-infringement. So that one is pretty self-evident
22 from the information that was available.

23 Q. Dr. Durham, this has nothing to do with an
24 infringement analysis. This has to do with whether
25 Solaris copied Masaba's unit, in your opinion, on

1 that subject. It has nothing to do with the claims
2 of the patent.

3 A. Well, I'm -- I just think I disagree with
4 that.

5 Q. Does Solaris's system use a bucket
6 elevator?

7 MS. FLANNERY: Object to form.

8 THE WITNESS: I don't think I've looked
9 into that.

10 Q. (By Mr. Nydegger) So you don't know if
11 Solaris's --

12 A. It would be --

13 MS. FLANNERY: Chad, let him finish. He
14 was still talking when you started your question.

15 THE WITNESS: It would be an assumption on
16 my part without doing a full analysis.

17 Q. (By Mr. Nydegger) So you don't know
18 whether Solaris's system uses a bucket elevator or
19 not?

20 A. Correct. I haven't done that analysis. I
21 haven't been asked to.

22 Q. How do you know whether it has a deployable
23 ramp or not?

24 A. Deployable ramp? Again, I haven't done
25 that analysis.

1 Q. So you don't know whether Solaris's device
2 has a deployable ramp or not?

3 A. Yeah, I think I would want to look at the
4 spec sheets with that in mind to be able to answer
5 that. Off the top of my head, I wouldn't be able to
6 answer that, unless you have the spec sheets
7 available that I could look at again. Perhaps then I
8 could.

9 Q. Does Dynatek disclose a vertical conveying
10 system?

11 A. We talked about that in the first
12 deposition as well. No, it does not.

13 Q. Do you agree that the '689 patent claims
14 the mechanical aspects of the system disclosed in the
15 '689 patent?

16 A. Can you repeat that? Your question broke
17 up there in the middle.

18 Q. Certainly.

19 Do you agree that the '689 patent claims
20 the mechanical aspects of the conveyor system
21 disclosed in the '689 patent?

22 MS. FLANNERY: Object to form.

23 THE WITNESS: Some of them, I agree.

24 Q. (By Mr. Nydegger) Tell me why you limit it
25 to "some of them."

1 A. Because my recollection is there are
2 mechanical aspects in the specification that are not
3 disclosed or not claimed.

4 Q. Okay. Thanks for that clarification.

5 A. If I could go off the record for 90 seconds
6 to refill this water glass.

7 MS. FLANNERY: Or we can just be silent.

8 (A discussion was had off the record.)

9 Q. (By Mr. Nydegger) Dr. Durham, does a '689
10 patent claim encoders?

11 A. My recollection is that's not in the
12 claims. I don't recall that in the claims. It is in
13 the spec.

14 Q. Does the '689 patent claim a control
15 assembly?

16 A. I don't believe so, but I would want to
17 look at the claims to verify that.

18 Q. Does the '689 patent claim a controller?

19 A. I think that's almost the same question as
20 before. I don't believe so, but I would want to look
21 at the claims to answer that with any confidence.

22 Q. Does the '689 patent claim a remote control
23 device?

24 MS. FLANNERY: Object to form.

25 THE WITNESS: I don't recall one.

1 Q. (By Mr. Nydegger) Does the '689 patent
2 claim sensors?

3 A. I think this line of question would go a
4 lot better if I had a copy of the '689 patent to
5 answer these questions.

6 Q. Sure.

7 A. Or my first declaration, either one.

8 Q. I've dropped a copy of Exhibit 1001, which
9 is the '689 patent in the chat.

10 A. I do not see a remote control.

11 Q. Does the '689 patent claim a display screen
12 or monitor?

13 A. I don't see that, no.

14 Q. Does the '689 patent claim memory?

15 A. No, I don't see that in the claims.

16 Q. Does the '689 patent claim wired or
17 wireless communication connections?

18 A. No, I don't see that in the claims.

19 Q. Does the '689 patent claim a method of
20 setting up an apparatus?

21 A. My recollection -- let me verify this. My
22 recollection is all the claims were apparatus claims,
23 not method claims. Let me verify that. Yes, that's
24 correct. The answer to the question is no, there are
25 no method claims in the '689 patent.

1 Q. So it does not -- it does not claim a
2 method of setting up an apparatus?

3 A. Yes, they're all apparatus claims.

4 Q. So similarly, it does not claim the method
5 for operating an apparatus, correct?

6 A. I agree.

7 Q. Are you an expert in the mechanical aspects
8 of the '689 patent?

9 A. Yes, I believe I meet the legal definition
10 of an expert. Sure.

11 Q. Well, I'm asking an expert -- are you an
12 expert in the mechanical aspects?

13 A. Yes, I -- I agree that I am.

14 Q. Okay. If you look at paragraph 20 of your
15 declaration.

16 A. Okay.

17 Q. If you focus on that first bullet point.

18 A. Okay.

19 Q. When was the last time you took a formal
20 class in any of the subjects listed in that first
21 bullet point?

22 A. In the '90s, 1990s, as far as a formal
23 class. You know what, I don't know -- or early
24 2000s.

25 Q. Sorry. I didn't hear the last part of your

1 answer.

2 A. Either the 1990s or the early 2000s for a
3 formal class.

4 Q. Were any of those classes of a graduate
5 level?

6 A. I don't recall. I know I took at least
7 fluid dynamics as a graduate, but I don't recall if
8 it's a graduate-level class or it's one I took just
9 for information purposes. I don't recall. It's been
10 way too long.

11 Q. When was the last time you designed the
12 mechanics of a system?

13 A. Designed mechanics of a system? Probably
14 2018-2019 timeframe.

15 Q. What system was that?

16 A. That was a piping system for oil and gas
17 production fields, piping and tank system.

18 Q. And prior to that, what was the last time
19 you designed the mechanics of a system?

20 A. I don't know that I can answer that.
21 You're asking -- that's too much of a memory test.

22 Q. Okay.

23 A. Yeah.

24 Q. When's the last time you built the
25 mechanics of a system?

1 A. As far as me physically constructing it?

2 Q. Yes.

3 A. Probably in the 2010 timeframe when I was
4 still in the field more.

5 Q. What system was that?

6 A. I don't recall what the last one would have
7 been. Certainly oil and gas facilities is what I was
8 working on a lot then, so platforms, piping, heater
9 treaters, things like that.

10 Q. That you physically built?

11 A. Yes. With help, of course, but I was out
12 there physically on the construction.

13 Q. You opined that it, "Is the movement and
14 orientation of Waldner's discharge chute that allows
15 the aggregate to be transported from the inlet to the
16 outlet," correct?

17 A. Can you point to what paragraph that is?

18 Q. 21.

19 A. Let me read that real quick. Correct.
20 Yes, I did make that statement.

21 Q. How does movement of Waldner's chute allow
22 the aggregate to be transported from the inlet to the
23 outlet?

24 A. The movement of the chute places it in such
25 a position that it exerts a horizontal force on the

1 aggregate as it moves down the chute.

2 Q. So is material flowing through the chute
3 when the chute is being moved?

4 A. Well, the movement places it in position
5 such that the chute exerts that horizontal force.

6 Q. So is it correct that the chute is moved
7 into position, the movement of the chute stops, and
8 then material begins to flow through the chute? Is
9 that how Waldner operates?

10 A. That's one way it operates. I don't think
11 you can limit it to there's no material flowing
12 through the chute as it's moving, but certainly it
13 does operate that way with the chute stopped.

14 Q. So is it your opinion that an operator
15 would be constantly moving the chute while the
16 material is flowing through it?

17 A. No.

18 Q. Well, then what's -- then explain to me why
19 the chute would be moving while the material is
20 flowing through it.

21 A. I'm not sure that's what I said, but I
22 think what I said is not limited to while it's
23 stationary. It certainly is possible that it could
24 be flowing through it. I think your question was
25 trying to limit it to only being stationary.

1 Q. Well, I'm trying to understand your
2 statement that we read. I'm trying to understand how
3 movement of the chute allows the aggregate to be
4 transported?

5 A. Because the movement --

6 Q. I understand your statement regarding the
7 orientation of the chute. I don't understand your
8 statement about movement of the chute and how that
9 movement allows the aggregate to be transported from
10 the inlet to the outlet.

11 Can you explain that to me, please?

12 A. Right. You can't have the orientation
13 without the movement.

14 Q. Well -- but the orientation is set when the
15 movement stops, right?

16 A. The orientation is set when the movement
17 stops. Yes, I can agree with that. At least until
18 the movement begins again.

19 Q. All right. And so the movement places the
20 chute in orientation, correct?

21 A. Certainly. Yeah.

22 Q. And then it's really the orientation of the
23 chute that allows the aggregate to be transported
24 from the inlet to the outlet, correct?

25 A. Well, you can't have orientation without

1 movement, so I'm not sure I understand what you're
2 trying to ask.

3 Q. Well, I'm trying to ask whether the actual
4 movement of the chute is what moves the aggregate
5 through the chute?

6 A. Well, the movement creates the orientation,
7 and then it's the horizontal forces exerted by the
8 chute that move it in a horizontal direction. And --
9 and gravity -- it's the division of gravity, the
10 forces of gravity based on the orientation that moves
11 it. So yeah, you have to have movement to get the
12 orientation, so it's both.

13 Q. So it's not your opinion that -- that the
14 chute is continuously being moved while the aggregate
15 is flowing through it. Is that fair?

16 A. Not necessarily.

17 Q. So it is your opinion that in Waldner, the
18 operator would be continually moving the chute to
19 cause the aggregate to flow?

20 MS. FLANNERY: Object to form.

21 THE WITNESS: That's not what I said at
22 all.

23 Q. (By Mr. Nydegger) Well, pick a side. I'm
24 trying to understand which side you're on.

25 A. I don't think there is a side. You're

1 trying to say that the operator would never move it
2 while sand's -- while aggregates are flowing down the
3 chute, and I can't agree with that statement.

4 Q. All right. Well, let's talk about during
5 normal operation.

6 Would an operator of Waldner, during normal
7 operation, continuously move the chute while sand is
8 flowing through the chute to fill the silo?

9 MS. FLANNERY: Object to form.

10 THE WITNESS: I certainly have seen
11 situations where chutes were continuously moving
12 where aggregate was flowing down them.

13 Q. (By Mr. Nydegger) Into a silo?

14 A. I don't recall whether I -- I don't recall
15 if I can make that statement or not. But certainly
16 particle movement, oftentimes the chute is shaken
17 side to side to assist in the movement of those
18 particles. So I can't say whether an operator would
19 or would not. It would depend on the operator or the
20 circumstance.

21 Q. (By Mr. Nydegger) It's your opinion that
22 Waldner's system could reach all six silos in a
23 six-pack configuration, correct?

24 A. If it was configured in such a way that it
25 had the proper height and length of the chute, and,

1 perhaps, in some cases a drop chute coming off of
2 that, then it could if it was configured properly,
3 sure.

4 Q. And a POSITA would know how to configure
5 Waldner properly to reach all six silos of a
6 six-pack, correct?

7 A. I would say that, yes. I can agree with
8 that.

9 Q. Could a telescoping conveyor have more than
10 two overlapping sections?

11 A. Yes.

12 Q. So if a telescoping chute has more than two
13 overlapping sections -- well, let me step back.

14 A POSITA would know that a telescoping
15 conveyor could have more than two overlapping
16 sections, correct?

17 A. Sure. I can see that.

18 Q. And if -- well, let's go to page 15,
19 paragraph 22 of your declaration.

20 A. Okay.

21 Q. On the figure in paragraph 22, you have a
22 purple telescoping conveyor depicted, correct?

23 A. Well, there is a telescoping conveyor.
24 I've got a black and white copy, so I can't speak to
25 the colors.

1 MS. FLANNERY: I can fix that.

2 THE WITNESS: Still hot.

3 MS. FLANNERY: Yep. Paragraph 22 is I
4 think where we were.

5 THE WITNESS: Okay. Yes, a purple
6 telescoping conveyor. I agree.

7 Q. (By Mr. Nydegger) Okay. And you opine
8 that because that purple telescoping conveyor has
9 only two overlapping sections, it would not be able
10 to reach the two silos closest to the inlet of the
11 conveyor, correct?

12 A. Correct. Yeah.

13 Q. Well, could a POSITA use more than two
14 overlapping sections of the telescoping conveyor to
15 reach the two closest silos to the inlet?

16 MS. FLANNERY: Object to form.

17 THE WITNESS: It's possible. This -- this
18 discussion was based largely on the -- on Waldner's
19 disclosure, which only had one telescoping joint. So
20 both the telescoping chute and telescoping conveyor
21 only have one based on the disclosure of Waldner,
22 which is what we're discussing.

23 Q. (By Mr. Nydegger) Okay. But you agree
24 that a POSITA would have understood that if it needed
25 to reach the closer silos, it could simply use more

1 than two sections in the telescoping conveyor to do
2 so?

3 A. Well, I --

4 MS. FLANNERY: Object to form.

5 THE WITNESS: I disagree with "simply," but
6 they could.

7 Q. (By Mr. Nydegger) You disagree with what?

8 A. "Simply." Your characterization that it
9 would be a simple thing to do. I think there's
10 engineering tradeoffs in any decision like that.

11 Q. Oh, so it -- so using a conveyor -- just
12 adding an additional section to a telescoping
13 conveyor is not simple?

14 A. I'd say it's not -- it's not just a wave of
15 the hand simple, no. There's engineering tradeoffs
16 that you would have to take into account, just like
17 in any engineered system.

18 Q. Okay. Is it your opinion that it would be
19 simple to change a telescoping gravity-fed chute for
20 an articulating conveyor belt?

21 A. No, not simple. There's engineering
22 tradeoffs to both.

23 Q. Okay.

24 A. It's obvious. Doesn't mean it's simple.

25 Q. Well, isn't the level of complexity part of

1 whether it's obvious or not?

2 A. Sure.

3 Q. How tall is the bucket conveyor disclosed
4 in Waldner?

5 A. As I recall, Waldner did not have a
6 measurement, which is why I used -- in order to do
7 the calculations, I used Solaris's silos to get an
8 idea of how that would be used in the -- with those
9 silos, how tall it would be. But Waldner doesn't
10 have any disclosure of that as I recall.

11 Q. So is there any evidence that Waldner's
12 height, as disclosed in Waldner -- as the device is
13 disclosed in Waldner, would need to be increased to
14 service any particular configuration of silos?

15 MS. FLANNERY: Object to form.

16 THE WITNESS: I don't think Waldner has a
17 height, so I don't think the answer -- the answer to
18 the question is no. We don't know either way. What
19 I did in my analysis of the height is compared the
20 height of a system using an articulated conveyor
21 versus using a chute.

22 Q. (By Mr. Nydegger) So is there any evidence
23 the system -- the height of the system disclosed in
24 Waldner would need to be increased to service any
25 particular configuration of silos such that it would

1 need additional road permits to be transported?

2 MS. FLANNERY: Object to form.

3 THE WITNESS: As compared to an articulated
4 conveyor, it would have to have the lengths that I
5 specified. As an example, using it with the systems
6 of Solaris's silos, which are disclosed on the face
7 of the '689 patent, then those are the calculations I
8 performed. So based on those calculations, it would
9 likely need longer ones.

10 Q. (By Mr. Nydegger) And --

11 A. That's the answer.

12 Q. So are you saying that -- that that height
13 is not -- that that height would be something
14 different than what's disclosed in Waldner?

15 A. No. I'm not saying that at all. I'm not
16 comparing it to Waldner. I'm not comparing -- I'm
17 comparing a configuration, just as Waldner, with the
18 configuration with a horizontal articulated conveyor
19 is what I'm doing in those paragraphs 32, 33, 34.

20 Q. Yeah, I understand that.

21 Is it correct that you don't know whether
22 Waldner's system, as disclosed in Waldner, needs
23 additional road permits or not?

24 A. As compared to what?

25 Q. As compared to not needing road permits.

1 A. You asked about additional road permits, so
2 you have to compare it to something to see if it
3 needs additional.

4 Q. Fair enough.

5 Is there any evidence that the height of
6 the system disclosed in Waldner would need road
7 permits for transportation?

8 MS. FLANNERY: Object to form.

9 THE WITNESS: It would to service the
10 Solaris six-pack configuration. That's what I opine
11 about.

12 Q. (By Mr. Nydegger) And is that
13 configuration disclosed in Waldner?

14 A. No. That's just an example in order to
15 provide a baseline.

16 Q. Is it covered by the --

17 MS. FLANNERY: Chad, let him -- he was
18 talking. Let him finish. I know it's hard, but...

19 THE WITNESS: That was a baseline in order
20 to just provide a set point of comparison. If you're
21 filling a very, very short silo, then I think
22 Waldner -- the configuration such as Waldner may not
23 need a road permit.

24 Q. (By Mr. Nydegger) As far as the actual
25 disclosure of Waldner goes, is it correct that it's

1 not possible to ascertain whether that system
2 disclosed would need road permits or not?

3 MS. FLANNERY: Object to form.

4 THE WITNESS: I think that's fair. Any
5 practical use I think it would, but I think
6 disclosure itself does not give information on that
7 topic.

8 Q. (By Mr. Nydegger) So in paragraph 27 of
9 your declaration, you talk about increasing the
10 height of the bucket elevator, referencing the bucket
11 elevator of Waldner, correct?

12 A. I think, again, I'm comparing a bucket
13 elevator with a chute and Waldner with a bucket
14 elevator in a horizontal -- used in a horizontal
15 articulating if we look at paragraphs 24, 25, 26 that
16 precede paragraph 27. So it's still a comparison.

17 THE WITNESS: And we've been going about an
18 hour, so when you get a chance to take a break, that
19 would be great.

20 MR. NYDEGGER: Sure. We can take a break.
21 Let's go off the record.

22 (Recess taken at 11:00, resuming at 11:08.)

23 Q. (By Mr. Nydegger) Dr. Durham, before the
24 break, we were looking at paragraph 27. Do you
25 recall that?

1 A. Yes, sir.

2 Q. The last sentence in paragraph 27, you
3 state, "In another example, increasing the height of
4 the bucket elevator would require further permitting,
5 which would make the system less convenient and more
6 complicated to transport."

7 Do you see that?

8 A. No, sir. I disagree.

9 Q. Okay. What do you disagree with? Did I
10 read it incorrectly?

11 A. Yes, you did.

12 Q. Okay. We'll try again.

13 "In another example, increasing the height
14 of the bucket elevator could require further
15 permitting, which would make the system less
16 convenient and more complicated to transport."

17 Is that correct?

18 A. Yes, sir, that's correct.

19 Q. Okay. And so is it your opinion that the
20 possible need for additional permits for transport
21 would be a factor that would tend to dissuade a
22 POSITA from making the bucket elevator of Waldner
23 taller?

24 A. Again, I'm not talking about, in paragraph
25 27, making the bucket elevator of Waldner taller, so

1 the answer to your question is no.

2 Q. What are you talking about in that sentence
3 that we just read?

4 A. We're comparing a bucket elevator with a
5 chute like Waldner with the bucket elevator with a
6 horizontal articulated conveyor like the combination.

7 Q. Okay. And that last sentence that we read,
8 that's referring to the bucket elevator with a
9 discharge chute, correct?

10 A. Yes. If we take the entire -- all those
11 paragraphs together, yes, that's the bucket elevator
12 with a discharge chute that's being compared to a
13 bucket elevator with an articulating conveyor.

14 Q. And so is it your opinion that the fact
15 that that bucket elevator with a discharge chute that
16 you're discussing in this comparison, that a POSITA
17 would be less inclined to increase the height of the
18 bucket elevator with a discharge chute due to the
19 fact that it could require further permitting?

20 A. Yes. That would disincentivize a POSITA
21 from increasing the height.

22 Q. Okay. Do you see where you state,
23 "Additional weight puts further limitations to
24 locations and routes taken during transport"?

25 A. Where is that? Where is that?

1 Q. I've just lost it now.

2 A. Okay.

3 Q. That's in the sentence just before the one
4 we read, second to last sentence.

5 A. Okay. Thank you. Yes, that is correct.
6 Additional length and weight would put further
7 limitations to locations and routes taken, correct.

8 Q. And so is it correct that adding weight to
9 a conveyor system results in drawbacks that would be
10 a disincentive to that configuration?

11 MS. FLANNERY: Object to form.

12 THE WITNESS: Yes. That's -- the purpose
13 of all these paragraphs to say it's not just simply a
14 matter of increase in height and increase in length
15 of the discharge chute.

16 There are certain engineering
17 considerations that have to be taken into account.
18 You can't just wave your hands and say you merely
19 increase it, as Mr. Anderson alleges.

20 So that's the point. Yes, the additional
21 length, the additional weight would -- would
22 disincentivize someone from doing that, or at least
23 provide a negative tradeoff that has to be
24 considered. I'm not saying they wouldn't do it
25 necessarily, just saying that it's a consideration

1 that has to be considered.

2 Q. (By Mr. Nydegger) And a POSITA would take
3 into account the same considerations when determining
4 whether to use a belt conveyor instead of a discharge
5 chute, correct?

6 A. Yes.

7 Q. If you look at paragraph 28.

8 A. Okay.

9 Q. Is the discussion in 28 talking about the
10 conveyor system that uses a discharge chute?

11 A. Yes. As compared to one that uses a
12 horizontal articulated conveyor.

13 Q. Okay. You state that, "Changing the
14 downward angle of the chute would require a further
15 increase to the height of the tower."

16 Do you see that?

17 A. Yes.

18 Q. Why would changing the downward angle of
19 the chute require increasing the height of the bucket
20 elevator?

21 A. As compared to the horizontal conveyor? It
22 would. You have to take into account the length of
23 the -- at least half the telescoping chute.

24 Q. So are you saying that if you -- if you
25 angled the telescoping chute downward to the closest

1 silo that the chute would be too long?

2 A. Well, what I'm saying is you have to have
3 enough height on the tower to take into account that
4 chute, so it's going to be taller than a system with
5 a horizontal conveyor.

6 Q. Okay. So I'm trying to understand what
7 you're communicating in paragraph 28.

8 When I read paragraph 28, I understood that
9 changing the downward angle of the chute would
10 require a further increase, meaning that it would
11 have to be increased above what you had already
12 stated in the previous paragraphs to be able to reach
13 the closest-most silos.

14 Was my understanding incorrect?

15 A. Well, it certainly is a possibility. For
16 example, in the -- in the sample -- that was not the
17 intent. It's certainly a possibility that you would
18 have to do that.

19 You certainly have to take that in
20 consideration, the half-length of the chute of
21 Waldner in the configuration, but that was not really
22 what I intended to say.

23 I intended to say it's taller than the
24 horizontal -- has to be taller than the horizontal by
25 at least a half-length of the chute or some

1 derivation thereof.

2 Q. Okay. Thank you for clarifying that.

3 You also state in paragraph 28 that it
4 would require an additional retractable drop chute.

5 A. Right.

6 Q. Why is that?

7 A. Well, if we look at the system of Waldner,
8 it has an angled spout at the bottom of the chute, of
9 the discharge chute, that would -- that kind of
10 allows the discharge chute to stop in this further
11 angle down.

12 We can imagine when that gets down to the
13 closer, if it's a very sharp angle, that chute's not
14 going to be operable, it's not going to really do
15 anything. So you have to need something else to
16 reach from the end of the conveyor to the silo or
17 else you're going to lose profit and have dust
18 problems.

19 Q. Well, because the chute is telescoping,
20 can't it just telescope so it's like right at the
21 inlet so there's not a gap between the chute and the
22 inlet?

23 A. It's possible, I guess. Comparing the
24 system of Waldner, you can't quite get that close
25 because of that -- because of that extension on the

1 end. So there would still be a gap that I think you
2 would want to take care of.

3 Q. Well, if an operator wanted to, couldn't an
4 operator telescope the chute so that that -- that
5 opening at the end of the chute is right -- even
6 resting on the edge of the opening of the silo?

7 A. Not with the system of Waldner, no, sir,
8 not without modifying Waldner.

9 Q. Why not? What would prevent that?

10 A. The position of that spout at the end of
11 the chute.

12 Q. That spout can't be positioned to align
13 with the opening of the silo?

14 A. Yes. If that's the case, then you have a
15 gap between the end of the chute and the top of the
16 silo. And that gap is what I'm saying you need to
17 address if it's down with a sharp angle.

18 Q. Well, I'm looking at your figures on
19 page 18.

20 A. Okay.

21 Q. And in the middle figure of the top row on
22 page 18, that shows the dispout chute reaching one of
23 the closest two silos, correct?

24 A. Right. With -- with a drop chute attached,
25 so that's -- those figures show a drop chute already

1 attached.

2 Q. Okay. A POSITA designing a conveyor system
3 with a discharge chute like that of Waldner would
4 understand the angle of repose for the material that
5 the system was being designed to convey, correct?

6 A. I would certainly hope so. Yes.

7 Q. And a POSITA would certainly understand how
8 to design that system with an appropriate angle to
9 accommodate the angle of repose of the material,
10 correct?

11 MS. FLANNERY: Object to form.

12 THE WITNESS: I would expect -- yes, sir,
13 based on the disclosure of Waldner and the knowledge
14 of a POSITA, I would expect they would. It is my
15 opinion they would know how to do that.

16 Q. (By Mr. Nydegger) Sorry. I missed your
17 last sentence.

18 A. Yeah, my opinion is they would know how to
19 do that. A POSITA would know how to do that, yes.

20 Q. Okay.

21 A. You would need to take that into account.

22 Q. So you run some calculations based on
23 designing systems to access a certain silo
24 configuration, correct? These calculations are in
25 paragraphs 31 through 33.

1 A. I do calculations that are independent of a
2 particular set, and then I apply those to a
3 particular silo set, as an example.

4 Q. Okay.

5 A. So the calculations are independent of that
6 particular silo set.

7 Q. Okay.

8 A. At least the first set of calculations,
9 yeah.

10 Q. And in paragraph 33 at the end, you state
11 that, "The top of the bucket elevator is
12 approximately 28 feet taller, and the telescoping
13 chute would have approximately 8.5 feet less reach
14 than an articulating belt conveyor of the same
15 length," correct?

16 A. Yes, for that example.

17 Q. And this example is an example of designs
18 to reach the silos in a Solaris six-pack, correct?

19 A. Right. Just as a baseline. Roughly and as
20 a baseline, just as an example.

21 Q. Okay. So in that example, the system with
22 the discharge chute would be able to access all six
23 silos, correct?

24 A. Right. As -- as shown in the figures on
25 page 18.

1 Q. Okay. And so --

2 A. Well, and -- and assuming it has -- and
3 assuming that the chute is 8 1/2 feet longer than the
4 horizontal conveyor.

5 Q. I'm sorry. You lost me with that last
6 sentence.

7 A. Well, because of the angle, you've got
8 8 1/2 feet less reach. So you would have to extend
9 the length of the chute longer than that of the
10 conveyor to at least take up that length.

11 It has to be 8 1/2 plus 8 1/2 times 1.17 or
12 .171, so about 9 1/2 -- roughly 9 1/2 feet longer
13 than the horizontal conveyor in order to reach all
14 the ones at the end.

15 Q. Okay. So you're saying that you would take
16 the length of the -- of the articulating conveyor,
17 add 8 1/2 feet to that, and that would make the
18 length of your --

19 A. Yeah, almost 9 1/2 feet.

20 Q. Okay. So you would add 9 1/2 feet to that,
21 and that would be the length of your discharge chute,
22 correct?

23 A. Correct, based on that -- based on that
24 particular configuration.

25 Q. Okay. Thanks for helping me understand

1 that.

2 If you go to paragraph 34.

3 A. Okay.

4 Q. You state that, "A longer chute may not be
5 able to collapse sufficiently to reach silos closer
6 to the bucket elevator."

7 Do you see that?

8 A. Yes, sir. That's correct. Without making
9 the tower -- I'm sorry -- without making the bucket
10 elevator, again, taller, as we discussed earlier.

11 Q. Well, you say that, "Making the chute
12 longer would present a similar problem to that of the
13 telescoping conveyor discussed above, in that a
14 longer chute may not be able to collapse sufficiently
15 to reach silos closer to the bucket elevator."

16 Do you see that?

17 A. Yes, I see that. That's correct.

18 Q. Well, similar to a telescoping conveyor, a
19 telescoping chute can have more than two sections,
20 correct?

21 A. Yes. That's not disclosed in Waldner, and
22 that's not part of the conversation. But yes.

23 Q. A POSITA would have known that, correct?

24 A. Presumably. I would have to look at the
25 art to see if they knew at the time of the filing,

1 but we can operate under that assumption.

2 Q. So a POSITA would have known that if it
3 needed to be able to retract further, it could just
4 use additional sections to be able to reach the
5 closer silos, correct?

6 MS. FLANNERY: Object to form.

7 THE WITNESS: Again, you kind of make it
8 sound simple, and I don't want it to sound that way
9 because it's an engineering tradeoff. You could also
10 do it by making the tower taller.

11 The point being there's -- the point of
12 this entire discussion is there's tradeoffs both
13 ways. Just because there's tradeoffs doesn't take
14 away from the obviousness of the combination.

15 Q. (By Mr. Nydegger) So in that same
16 paragraph, you talk about increasing the length of
17 Waldner's discharge chute would have made it heavier
18 and more difficult to manipulate.

19 Do you see that?

20 A. Yes, without modifications.

21 Q. And so when you say "without modification,"
22 it can be modified so it wouldn't -- would not be
23 heavier and more difficult to manipulate?

24 A. Well, I think the next sentence answers
25 that. "Even if a POSITA could modify the

1 construction materials, the modification would still
2 have added further complication and potentially
3 required retest and requalifying the chute."

4 Yeah, you can envision, perhaps, changing
5 materials and taking care of the heaviness issue. We
6 still have the length issue as far as hard to
7 manipulate, particularly since Waldner is only
8 manipulating from one end.

9 The point being even if you could make it
10 not significantly heavier, it's still a tradeoff.
11 It's something you have to take into account. It's
12 not just a simple -- it's not just a simple
13 transition.

14 Q. What are the further complications you
15 reference in that paragraph?

16 A. The complications, as far as finding
17 material that works, further complication as to
18 making sure that material is suitable in wear.
19 There's a lot of things that go into -- into that --
20 you can make it longer, that's going to make it
21 heavier. If you want to modify the design to make it
22 not heavier, that's a more complicated design. So it
23 adds complications.

24 Q. And those are not -- those are not simple
25 matters to deal with, correct?

1 A. No, it's not just simple. You can't just
2 wave your hand and do it, you have to engineer it.

3 Q. Okay.

4 A. There's engineering tradeoffs in
5 everything.

6 Q. In this paragraph, you talk about
7 retesting.

8 Do you see that?

9 A. Yes.

10 Q. What retesting would potentially be
11 required?

12 A. I can envision a couple things. I can
13 envision weathering and wear as two things you'll
14 probably need to look at. There may be others.

15 Q. Is it possible that they might not need to
16 be retested?

17 MS. FLANNERY: Object to form.

18 THE WITNESS: It's possible, yeah. I think
19 that's why I said potentially required retesting.

20 Q. (By Mr. Nydegger) So that's the genesis of
21 my question is you say potentially required, which
22 suggests to me it may or may not. Is that correct,
23 it may or may not need retesting?

24 A. Right. I think that's a fair
25 interpretation of "potentially."

1 Q. Okay. Let's take the example of modifying
2 Waldner to replace the discharge chute with an
3 articulated conveyor.

4 Would that modification require testing?

5 A. Require testing, yes.

6 Q. And that's not a potentially required,
7 that's an absolutely required if you made that
8 significant of a modification, correct?

9 A. I would expect so, yes.

10 Q. And you also talk about requalifying the
11 chute in that same sentence.

12 Do you see that?

13 A. Yes.

14 Q. And is that the same as -- as our
15 discussion with -- as retesting, that if you modify
16 the chute, you may or may not need to do requalifying
17 activities?

18 A. Yes.

19 Q. Once again, if you modified Waldner and
20 replaced the discharge chute with an articulated
21 conveyor, you would absolutely have to go through
22 those qualifying activities with such a substantial
23 change to the device, true?

24 MS. FLANNERY: Object to form.

25 THE WITNESS: With that change to the

1 device, I would expect that you would want to qualify
2 it, yes.

3 Q. (By Mr. Nydegger) Does using an
4 articulated conveyor like that disclosed in Dynatek
5 in the place of Waldner's discharge chute have any
6 drawbacks?

7 A. Sure. Could.

8 Q. What are those drawbacks?

9 A. I think we discussed it's possible in
10 our -- in our first deposition, it's possible that
11 it's heavier. It's possible that it's more
12 complicated. It's possible it's more expensive. So
13 there are drawbacks and benefits to both options.

14 Q. We also just talked about it would need to
15 be tested and qualified, correct?

16 A. Correct. More likely than not, I expect
17 that.

18 Q. Any other drawbacks that you can think of?

19 A. There's discussion in my declaration about
20 tracking, so that's a consideration that you would
21 have to take into account. It's something you have
22 to be aware of. Maybe the belt material wears faster
23 than the chute.

24 I don't know that that's -- in fact, I'm
25 kind of expecting that's not the case. But those are

1 ones I can think of. There may be other benefits and
2 other drawbacks that I can't remember at this stage.

3 Q. Are you aware of any evidence of silos
4 located behind a bucket elevator system for conveying
5 aggregate to the silos?

6 MS. FLANNERY: Object to form.

7 THE WITNESS: No, I haven't seen that in
8 this case.

9 Q. (By Mr. Nydegger) Do you have any evidence
10 that Waldner could not reach silos in varying numbers
11 and configurations in several places at an oil and
12 gas wellsite?

13 MS. FLANNERY: Object to form.

14 THE WITNESS: Varying numbers and
15 configurations? No, I think it could. It may take
16 repositioning Waldner to do that, as I discuss in
17 paragraph 35. But it could be used that way.

18 Q. (By Mr. Nydegger) Is it your opinion that
19 Waldner cannot reach silos on more than one side of a
20 silo-filling system?

21 A. I think it could be configured in a
22 position that it could reach a configuration on more
23 than one side. It may take repositioning.

24 Q. Could it configured to reach silos on more
25 than one side without being repositioned?

1 MS. FLANNERY: Object to form.

2 THE WITNESS: It's possible if you made it
3 tall enough and the chute long enough, which, again,
4 will be a modification of Waldner since Waldner is
5 only designed for one silo.

6 Q. (By Mr. Nydegger) What in Waldner limits
7 that disclosure to filling only one silo?

8 A. There's only one disclosed in Waldner, and
9 it talks about driving up to a silo.

10 Q. Is it any less important for a system using
11 an articulated conveyor to be installed on level
12 ground than it is for a system using a discharge
13 chute?

14 A. Less important? No.

15 Q. Is it more important for a system using an
16 articulated conveyor to be installed on level ground
17 than it is for a discharge chute?

18 MS. FLANNERY: Object to form.

19 THE WITNESS: No.

20 Q. (By Mr. Nydegger) So the importance is the
21 same for both systems in your opinion. Is that
22 correct?

23 A. Yes, particularly with the elevated
24 assembly that both would have, the bucket elevator.

25 Q. Are you aware of any configuration of silos

1 disclosed anywhere in the prior art that span more
2 than 180 degrees?

3 MS. FLANNERY: Object to form.

4 THE WITNESS: I don't have all of it
5 memorized right now. Seems to me I've seen some -- I
6 have seen that in some publications, but I don't have
7 them at hand here.

8 Q. (By Mr. Nydegger) So -- so you -- you seem
9 to recall having seen a configuration of silos where
10 there was not a single point around that
11 configuration of silos where all the silos would fall
12 within 180 degrees. Is that correct?

13 MS. FLANNERY: Object to form.

14 THE WITNESS: It's where you're measuring
15 from, what -- where you're measuring 180 degrees from
16 is really the question.

17 Q. (By Mr. Nydegger) Well, my question is --
18 you said you've seen dozens of wellsites with silo
19 configurations, correct?

20 A. Yes.

21 Q. Are those silo configurations grouped close
22 around the wellsite?

23 A. They're typically grouped approximate to
24 the blender and even in some situations above the
25 blender.

1 Q. Okay. Have you ever -- have you ever seen
2 a setup where there were silos behind a bucket
3 elevator conveying system?

4 MS. FLANNERY: Object to form.

5 THE WITNESS: I have seen systems where
6 silos are configured in an L configuration such that
7 if the bucket elevator were placed in the center of
8 that L, then they would be behind it and more than
9 180 degrees. Again, it's where you're operating --
10 where you're measuring from.

11 Q. (By Mr. Nydegger) But in an L
12 configuration, it would also be possible to place --
13 in that L configuration, there are also places where
14 all of those silos would be within 180 degrees of --
15 of a bucket elevator, correct? Just depends on where
16 you put it, right?

17 MS. FLANNERY: Object to form.

18 THE WITNESS: That's what I said earlier.

19 MS. FLANNERY: Wait. Object to form. Go
20 ahead.

21 THE WITNESS: That's what I said earlier,
22 depends on what you're measuring from. It would be
23 advantageous to put the bucket elevator in the center
24 of the L, for example, if you have the ability to, as
25 the combination does, reach more than 180 degrees.

1 Q. (By Mr. Nydegger) Why is that
2 advantageous?

3 A. Because in the L configuration, you have to
4 reach wider to reach the same -- the same -- to reach
5 all the -- all the silos, you would have to have a
6 longer system with a longer articulated conveyor --
7 I'm sorry -- a longer chute if you placed the bucket
8 elevator to the side than you would if you had it in
9 the middle of the L.

10 Q. Well, as long as the bucket elevator can
11 reach all the silos, that's really the only thing
12 that matters, correct?

13 MS. FLANNERY: Object to form.

14 THE WITNESS: Well, no, because now it
15 would be advantageous to have a shorter chute or a
16 shorter articulating conveyor because for all the
17 reasons that I noted in the previous paragraphs.

18 Q. (By Mr. Nydegger) Well, but that also
19 comes with its own drawbacks, right?

20 MS. FLANNERY: Object to form.

21 THE WITNESS: What comes with its own
22 drawbacks?

23 Q. (By Mr. Nydegger) A shorter chute.

24 A. Well, yes, a shorter chute does have
25 drawbacks compared to a longer chute. Can't reach as

1 many places.

2 Q. So back to my earlier question.

3 Is it correct that you have never seen a
4 setup where there were silos located behind a bucket
5 elevator --

6 MS. FLANNERY: Object to form.

7 Q. (By Mr. Nydegger) -- at a wellsite?

8 MS. FLANNERY: Same objection.

9 THE WITNESS: I can go so far as to say I
10 don't recall one at this time. I'm not going to go
11 so far as never.

12 Q. (By Mr. Nydegger) Okay. You agree that
13 Waldner discloses a discharge chute that has
14 180 degrees of reach, correct?

15 A. As we discussed at some length in my first
16 deposition, somewhere around 180 degrees.

17 Q. And do you agree that there would be no
18 unusual wear if the Waldner chute is operated within
19 that range of reach?

20 MS. FLANNERY: Object to form.

21 THE WITNESS: I would say there's more
22 stress in the system and more wear operating at the
23 edges than it is front and center. I don't know what
24 you mean by "unusual."

25 Q. (By Mr. Nydegger) Well, in paragraph 38,

1 you talk about Waldner experiencing strain and wear
2 on the actuators used to move the discharge chute.

3 Do you see that?

4 A. I think the sentence reads, "Doing so may
5 cause strain and wear on the actuators used to moved
6 discharge chute and are the components that connect
7 the discharge chute to the vertical frame."

8 Q. Correct. And so when you reference strain
9 and wear, is it correct that you're talking about
10 strain and wear that is other than operating it
11 within its normal range -- its intended range?

12 MS. FLANNERY: Object to form.

13 THE WITNESS: Can you rephrase that
14 question, please?

15 Q. (By Mr. Nydegger) I'm just trying to
16 understand what strain and wear you're referring to
17 in that sentence.

18 Is that strain and wear any different than
19 operating it in -- in other angles?

20 A. Yes. The strain and wear is going to be
21 different than operating straight ahead. I think I
22 said that earlier. So a good analogue, I don't know
23 if you drive four-wheel drive trucks, maybe you do,
24 maybe you don't, but if you have the truck in
25 four-wheel drive and you go to the extent of the

1 turning -- try to make a super tight turn at the edge
2 of the turning radius of the truck, you're causing
3 more wear on the transmission system and the tires
4 than you would be if you were driving straight ahead.

5 So that's the same kind of concept. It
6 applies to non-four-wheel drive as well. It's just
7 easier to envision it with a four-wheel drive.

8 So yes, anytime you're operating a machine
9 at its limits, you've got different strain and
10 different wear configurations needed than if you're
11 operating it straight ahead.

12 Q. So that strain and wear, we'll call that --
13 for just clarification purposes, let's call that
14 additional strain and wear as compared to operating
15 straight ahead. Okay?

16 A. Okay. I would prefer to use the word
17 "different."

18 Q. Different strain and wear?

19 A. Yes.

20 Q. Okay. That's fine.

21 So that different strain and wear as
22 compared to operating straight ahead, at what angle
23 would the device begin to experience that different
24 strain and wear?

25 MS. FLANNERY: Object to form.

1 THE WITNESS: Anytime you move, it's going
2 to have different strain and wear. But when you're
3 operating towards the edge of the machine, it's --
4 it's not something I quantified because it's not
5 necessary.

6 It's simply pointing out that there are
7 additional considerations that have to be taken into
8 account if you're using the system in that manner.
9 It's not just -- it's not just a simple matter of
10 doing it.

11 Q. (By Mr. Nydegger) So is it correct then
12 that as soon as you move one degree off center, you
13 start to encounter that different strain and wear
14 that you're talking about in paragraph 38?

15 A. Probably. Yep. Depending on the accuracy
16 of your calculations and your measurements, it's
17 going to be different. So you have to take that into
18 account. That's the point of the sentence.

19 Q. So that -- that different strain and wear
20 that you reference there, that applies to all degrees
21 of operation other than straight ahead, correct?

22 MS. FLANNERY: Object to form.

23 THE WITNESS: Yes. And a POSITA
24 understanding mechanical systems would realize that
25 if you're pushing it towards the edges, that's going

1 to cause -- I don't know if more different -- it's
2 going to exert significantly different forces -- let
3 me see how I can say this.

4 If you're operating any machine at the edge
5 of its limits, then that strain and wear is going to
6 be more likely than not more than it is if it's
7 operating straight ahead, and certainly of a
8 different shape and configuration, even more
9 drastically than just operating a little off center.

10 Same thing as driving your car down the
11 highway straight and driving your car making a
12 90-degree turn. The strain and wear is much
13 different and likely more at a 90-degree turn than it
14 is going straight ahead.

15 Q. (By Mr. Nydegger) Okay. In paragraph 38,
16 you also talk about adding a second pivot point.

17 Do you see that?

18 A. Yes.

19 Q. Adding a second pivot point would also
20 require adding control mechanisms for operating that
21 second pivot point, correct?

22 A. Yes.

23 Q. And so to add the second pivot point and
24 all the controls necessary to operate the second
25 pivot point, that would increase the complexity of

1 the device, correct?

2 A. Complexity of the control system,
3 certainly.

4 Q. Wouldn't it also increase the complexity of
5 the chute itself having now a second pivot position?

6 MS. FLANNERY: Object to form.

7 THE WITNESS: Yes, I would say so.

8 Q. (By Mr. Nydegger) Would it increase the
9 number of possible fail points?

10 MS. FLANNERY: Object to form.

11 THE WITNESS: I'm not sure -- no, I don't
12 agree with that because you already have an
13 articulating joint in the straight chute, so you have
14 the same number of failure points.

15 Q. (By Mr. Nydegger) So the additional
16 controls to operate that second pivot point, those
17 would not be additional fail points as compared to
18 having one pivot point?

19 A. No. Not compared to a telescoping chute,
20 no.

21 Q. Would adding a second pivot point increase
22 the weight?

23 A. Possible.

24 Q. Would it increase the overall number of
25 components of the device?

1 A. No, I don't know that it would necessarily.

2 No. Just change the configuration of the components.

3 Q. Does Waldner contain limits on the
4 discharge rate of the system disclosed in Waldner?

5 A. No, I don't recall that.

6 Q. Is it true that all conveyors have a limit
7 on their discharge rate?

8 A. I would say that, yes, all conveyors would
9 have some practical limit on their discharge rate.

10 Q. And that maximum rate is established at the
11 time that it's constructed, correct?

12 MS. FLANNERY: Object to form.

13 THE WITNESS: Yes.

14 Q. (By Mr. Nydegger) And that's true for both
15 systems that use belt conveyors and for systems that
16 use discharge chutes, correct?

17 A. Yes. The maximum rate of the system would
18 be set.

19 Q. And is it correct that a POSITA could
20 configure the maximum discharge rate of a discharge
21 chute to match the maximum discharge rate of base
22 conveyor?

23 A. Yes. You could do that. Still a function
24 of the height of the chute and the length you're
25 trying to reach.

1 Q. Well, in fact, it would make sense to do
2 that, right, so that you don't have wasted capacity
3 where one part has significantly more capacity than
4 another part?

5 MS. FLANNERY: Object to form.

6 THE WITNESS: Now you're talking about
7 significantly more, which is kind of a different
8 question. I think it's an engineering tradeoff you
9 have to consider. Would you want the system to be
10 operating with a lower conveyor at its maximum?
11 Maybe not.

12 Again, that's going to increase or cause
13 additional wear and strain or different wear and
14 strain. So you would -- that would all go into the
15 calculations.

16 Whether or not you actually did it because
17 of the drawbacks to running the system that way and
18 having a higher tower to be able to do that, that's
19 the kind of decisions engineers make.

20 Q. (By Mr. Nydegger) How do conveying systems
21 like those of Waldner, they are designed with an
22 operable envelope, correct?

23 MS. FLANNERY: Object to form.

24 THE WITNESS: Did you say within an
25 operable envelope? Is that what you said?

1 Q. (By Mr. Nydegger) Yes. They're designed
2 to have an operable envelope. Is that correct?

3 MS. FLANNERY: Object to form.

4 THE WITNESS: If by "operable envelope"
5 you're meaning it's designed to have a kind of a
6 minimum rate and maximum rate, then I agree with
7 that.

8 Q. (By Mr. Nydegger) Okay. And is it also
9 correct that when we're talking about the reach of
10 the discharge chute or the discharge mechanism, that
11 it's designed to have -- to be operable within an
12 envelope of a certain area around the -- around the
13 system, correct?

14 A. Yes.

15 Q. Could a substance partially obstruct an
16 articulated belt conveyor?

17 A. I'm sorry. I missed the first three words.
18 They kind of ran together.

19 Q. No problem.

20 Could a substance partially obstruct an
21 articulated belt conveyor?

22 A. Is it possible? Yes.

23 Q. And in that scenario, would that
24 obstruction affect the discharge rate?

25 A. It could. The benefit of a conveyor system

1 is you have some mechanical force operating in the
2 horizontal direction that would tend to break up such
3 obstructions, but it still could affect the rate.
4 Not -- yeah. Not in the same way as it would a
5 chute, but it's possible.

6 Q. Move to strike everything after "it could"
7 as nonresponsive.

8 If aggregate is wet, it's heavier, correct?

9 A. Generally so, yes. The density of the
10 material is heavier. Yep.

11 Q. And if a conveyor is designed for dry
12 aggregate, that increased weight in moist aggregate
13 could affect the conveyor's discharge performance.
14 Is that correct?

15 A. Yes. I can't imagine why you would design
16 a system for dry only in the oil field. If you
17 designed it that way, yes, a wet aggregate would
18 affect it. At least in this conveying-type system, I
19 can't imagine why you'd design it for only dry
20 aggregate.

21 THE WITNESS: We've been going about
22 another hour. When you get to a point, that would be
23 great.

24 MR. NYDEGGER: Yeah, this is a good point.
25 That would be great.

1 (Recess taken at 11:57, resuming at 12:04.)

2 Q. (By Mr. Nydegger) Dr. Durham, if you could
3 go to paragraph 42, please. In paragraph 42, you
4 say, "Assuming a larger input rate."

5 Larger than what?

6 A. A larger discharge rate than would be
7 designed in the chute system.

8 Q. Designed in what -- in what --

9 A. In a chute system. So the point of that
10 paragraph, reading that paragraph in whole, the point
11 of the paragraph is normally in a conveying system,
12 we want to reduce speed as much as possible in order
13 to move the volume of the contents, right? We want
14 to stack the contents on -- as a general rule, as a
15 rule of thumb.

16 The point I'm making here is, look, if you
17 increase the system by, for example, having trucks
18 come faster, which would be kind of a limit on
19 Waldner is how fast the trucks could discharge, then
20 you want to speed up the belt in order to keep the
21 amount of material on the belt at any given time
22 slower -- slower because of the weight
23 considerations. That's the point of the paragraph.

24 Q. So the point of the paragraph is that --
25 sorry. Say that again. I didn't quite follow.

1 A. Yeah. So I'm -- I'm responding to
2 Mr. Anderson's assumption that every system disclosed
3 by Waldner or built according to Waldner would
4 already be designed to accommodate the maximum
5 possible discharge rate of any truck that might be
6 used to unload sand in it.

7 I'm saying, Well, the trucks are developed
8 all the time that increase it, and you would want to
9 be able to increase the discharge rate of the
10 conveyor in order to take care of those additional
11 weight considerations. Even if the conveyor would
12 already handle the volume, you don't want it stacked
13 as high because it's heavier.

14 Q. So the point of your paragraph is that
15 you -- you would need to modify the base conveyor as
16 well to be able to handle the additional weight. Is
17 that --

18 A. The point of the paragraph is you have
19 additional control. As I said in my first
20 declaration, adding the conveyor system on the
21 discharge arm gives you more control, more options
22 for control.

23 And that's -- that's kind of the point of
24 the system. And one of those examples of options of
25 control is you could speed it up in order to reduce

1 the weight, for example, if you did have faster
2 trucks.

3 Yes, you would have to speed up the lower
4 conveyor as well or stack it up higher. Since it's
5 on the ground, that's less of a concern.

6 Q. Regardless of the ability to speed it up or
7 slow it down, we've already established, I believe,
8 that every conveyance system has a range of operation
9 for how much material it could move in a certain
10 time, correct?

11 MS. FLANNERY: Object to form.

12 THE WITNESS: They do have practical
13 limits, yes, as any system does.

14 Q. (By Mr. Nydegger) Exactly. And so if the
15 trucks are unloading faster than what the system is
16 capable of handling, then it's going to max out the
17 system, and it's going to be a problem, right?

18 MS. FLANNERY: Object to form.

19 THE WITNESS: That's a fair statement.

20 Q. (By Mr. Nydegger) And as long the trucks
21 are unloading at a speed that is within the range of
22 operation for the system, then it's not a problem,
23 correct?

24 MS. FLANNERY: Object to form.

25 THE WITNESS: The rate of the truck

1 unloading will not be a problem for the system to
2 handle. There may be other problems.

3 Q. (By Mr. Nydegger) And there may not be
4 other problems. I mean, to say there may be other
5 problems, that's meaningless. There may or may not
6 be. Who knows? These are systems.

7 A. Well, that's the point. I was responding
8 to the question the way you asked it, you assumed
9 there would not be problems of any variety. So I
10 answered it as accurately as I could.

11 Q. There would not be problems due to the fact
12 of the discharge rate of the truck?

13 A. Yeah, that's -- that's -- if I didn't say
14 it, that's what I intended to say.

15 Q. Okay. So --

16 A. There would not be problems -- yeah, I'm
17 sorry. Just to clarify. There would not be problems
18 with the system handling the discharge rate of the
19 trucks.

20 Q. Okay.

21 A. Yeah.

22 Q. Thank you.

23 So, in your opinion, if you have an
24 articulated belt conveyor and you have a discharge
25 chute that both have the same maximum discharge rate

1 capacity, which will weigh more?

2 MS. FLANNERY: Object to form.

3 THE WITNESS: I think we've had this

4 discussion in the first declaration -- first

5 deposition. You can't say for certain either way.

6 Q. (By Mr. Nydegger) Okay.

7 A. Depends on the configuration of both, the

8 materials of both. All those things we discussed the

9 first time through.

10 Q. Is it easier to redesign the width of a

11 discharge chute or to design an articulated belt

12 conveyor?

13 MS. FLANNERY: Object to form.

14 THE WITNESS: There are engineering

15 tradeoffs to both you would have to consider. I

16 don't know that you can say one's easier than the

17 other.

18 Width has problems. If you make it wider,

19 you have to make the frame wider or may have to make

20 the frame wider. I don't think you can say easier

21 either way. They're both engineering tasks.

22 Q. (By Mr. Nydegger) You state that,

23 "Enlarging the diameter of the chute may not increase

24 discharge rates if those rates are being limited by,

25 for example, obstructions in the chute."

1 Can't the same -- can't the same statement
2 be said for an articulated belt conveyer?

3 A. As I talked about earlier, the advantage of
4 the articulated belt conveyor is you have mechanical
5 force operating in the horizontal direction that
6 would be more likely to clear those obstructions than
7 you would in a chute that's simply dependent on
8 gravity. That's -- that's kind of the point.

9 Q. But still, if the articulated belt conveyor
10 is partially obstructed, then changing the capacity
11 of the articulated belt conveyor is not going to
12 increase the discharge rate?

13 MS. FLANNERY: Object to form.

14 THE WITNESS: That's the advantage of an
15 articulated belt conveyor is if you have an
16 obstruction that you don't want to deal with, you can
17 change the rate or the speed of the belt conveyor to
18 make up for it. That's the point. And with the
19 advantage of also more likely to knock it out or less
20 likely to obstruct, you have control.

21 Q. (By Mr. Nydegger) And so if the
22 obstruction remains, then -- and you increase the
23 speed, that's going to cause problems because you're
24 going to have pileup and spill-out, and you're going
25 to -- that's going to create problems, isn't it?

1 MS. FLANNERY: Object to form.

2 THE WITNESS: No, the advantage is you have
3 another option. That's -- that's the point is you
4 have another option. You can increase speed. No
5 more likely to have pileups than you would at a
6 slower speed. In fact, you're less likely.

7 Q. (By Mr. Nydegger) Your hypothetical
8 assumes that it's obstructed. If it's obstructed,
9 it's obstructed.

10 A. Well, I did not interpret your hypothetical
11 to mean it's completely obstructed, and that's not
12 what I was saying in this sentence.

13 Q. Well, in the sentence, you say, "Enlarging
14 the diameter of the chute may not increase discharge
15 rates if those rates are being limited by, for
16 example, obstructions in the chute," what are you
17 saying there if not that?

18 A. Well, obstructions does not imply plugging
19 at all. That may be an ultimate result of an
20 obstruction, so it may ultimately plug. But that's
21 not what I'm talking about. I'm talking about rates
22 are limited by obstructions.

23 Q. How does the hypothetical of an obstructed
24 discharge chute have anything to do with increasing
25 the diameter and whether increasing the diameter

1 would increase a discharge rate?

2 A. Well, as you recall, I talked about
3 obstruction of the chute before we increase the
4 diameter. The point being the same drawbacks are
5 still here, even by increasing the diameter. Doesn't
6 fix that.

7 Q. Well, yeah, your hypothetical assumes it's
8 obstructed, so nothing you do changes your
9 hypothetical.

10 A. Sir, I take issue. It's not a
11 hypothetical. This is -- this is just a statement, a
12 fact.

13 Q. Oh, it's a fact that it's obstructed?

14 A. No, it's a fact that if the rates are
15 limited by obstructions in the chute, then enlarging
16 the diameter of the chute may not increase the
17 discharge rate, just as the sentence says.

18 Q. Well, let's take that hypothetical. So if
19 your articulated belt conveyor is obstructed, then
20 increasing the speed of the articulated belt conveyor
21 won't increase the discharge rate because it's
22 obstructed, correct?

23 MS. FLANNERY: Object to form.

24 THE WITNESS: I disagree for the reasons I
25 said earlier.

1 Q. (By Mr. Nydegger) All right. Are flat
2 planar surfaces more susceptible to wind forces than
3 rounded surfaces?

4 MS. FLANNERY: Object to form.

5 THE WITNESS: In what configuration is the
6 flat planar surface?

7 Q. (By Mr. Nydegger) A rectangle.

8 A. Well, it depends on the configuration how
9 it's laid out. If you have a rectangle configuration
10 laid out where the length and width are in the
11 horizontal direction and the height is short, then
12 that would be less susceptible to wind forces than a
13 round.

14 If you put the same thing where it's
15 vertical, it could be more. Depends on the
16 configuration and the size of the flat planar surface
17 versus the two, a round.

18 Q. So let's take a discharge chute of Waldner,
19 which is round --

20 A. Uh-huh (affirmative).

21 Q. -- and -- and articulated belt conveyor
22 that is rectangular along its length, and of those
23 two, is the rectangular discharge mechanism or the
24 round mechanism of similar size likely to incur
25 greater wind forces?

1 MS. FLANNERY: Object to form.

2 THE WITNESS: I know you're not going to

3 like this answer, but it depends on the

4 configuration. If we take the disclosure of Dynatek

5 where it has struts that may allow wind to pass

6 through it, you have to take that into consideration

7 and compare that with the round. So it -- you would

8 have to calculate it in order to answer the question.

9 Q. (By Mr. Nydegger) Let's assume that it's

10 enclosed, as you state that it is and would be in

11 your first declaration, to mitigate dust problems.

12 So let's assume that the articulated belt conveyor is

13 enclosed so that wind cannot pass through the struts.

14 A. Okay. We can make that assumption.

15 Q. Under that assumption, which would incur

16 more wind forces?

17 A. If you make the assumption again that they

18 have the same height, which I don't know that you can

19 make that assumption, then the rectangular surface

20 would.

21 Q. In paragraph 48, you state, "To the extent

22 that the belt conveyor of Dynatek has less surface

23 area than the chute of Waldner, it may be less

24 susceptible to the effects of wind."

25 A. Correct.

1 Q. To what extent is the belt conveyor of
2 Dynatek having less surface area than the chute of
3 Waldner?

4 A. Well, to the extent that it would. That's
5 the point is you have to calculate these. You can't
6 just make a blanket statement. You have to actually
7 look into it and calculate it.

8 Q. So you're not opining about whether it does
9 or doesn't, you're just stating generally if Dynatek
10 has less surface area, then it might be less
11 susceptible to the effects of wind --

12 A. Right.

13 Q. -- than a Waldner disclosure?

14 A. That's exactly what the sentence says, yes,
15 sir.

16 Q. Okay. So if we go to paragraph 52.

17 A. Okay.

18 Q. And you have a figure there. Do you see
19 that?

20 A. Yes.

21 Q. And on that -- on that figure, you have an
22 articulated belt conveyor drawn in red. Is that
23 correct?

24 A. Right. The schematic representation of an
25 articulated belt conveyor.

1 Q. And that's -- you've drawn that articulated
2 belt conveyor in a transport configuration, correct?

3 A. Correct. Yes.

4 Q. Is that transport configuration shown in
5 that Figure 7 with your annotations disclosed
6 anywhere in the prior art?

7 MS. FLANNERY: Object to form.

8 THE WITNESS: That -- that's part of the
9 combination. So no, that's not disclosed in the
10 prior art. That's part of the combination.

11 Q. (By Mr. Nydegger) That configuration, that
12 transport configuration is not disclosed, correct?

13 MS. FLANNERY: Object to form.

14 THE WITNESS: That's correct.

15 Q. (By Mr. Nydegger) But that configuration
16 is disclosed in the '689 patent, correct?

17 MS. FLANNERY: Object to form.

18 THE WITNESS: I would want -- I've got the
19 '689 patent. Let me look at the figures at least.
20 Something similar to that is in Figure 2B. I didn't
21 spend a lot of time with the figures of '689, so it
22 may be other places as well. I don't know.

23 Q. (By Mr. Nydegger) Let's go to paragraph 54
24 of your declaration.

25 A. Okay.

1 Q. Do you see where you state that, "It's
2 typical for equipment suppliers and operators to have
3 to obtain permits to transport oversize equipment on
4 certain highways or to plan transport routes that
5 will not require such permits"?

6 A. Yes. "In the oil and gas industry" is the
7 predicate to that sentence. But yes.

8 Q. So is it your opinion there that any need
9 to acquire additional permits for transportation
10 would not dissuade a person of skill in the art from
11 using the Dynatek combination with Waldner?

12 A. Well, I think if we take the entire
13 paragraph as a whole, I say, "Nor would a POSITA
14 expect that such a system what that would need
15 permits would be possible or prohibitively difficult
16 to transport," which is kind of what Mr. Anderson
17 theorizes. Yes, that's a disincentive, certainly, as
18 we talked about earlier, but it's not impossible.

19 Q. Okay.

20 A. Yep.

21 Q. So if you go to paragraph 59.

22 A. Okay.

23 Q. You state that -- this is in the second
24 full sentence of paragraph 59. You state that, "In
25 making the proposed combination, a POSITA would

1 attach a trust frame around the conveyor (or
2 Waldner's discharge chute) like that disclosed in
3 Dynatek to the bucket elevator frame of Waldner in a
4 manner that allows the chute or conveyor to move
5 relative to the deployable frame."

6 Do you see that?

7 A. Yes.

8 Q. What teaching in the prior art do you rely
9 on for that statement concerning the attachment?

10 A. Well, for example, Waldner teaches
11 brackets, links, and pins that attach the chute to
12 the deployable frame. Plus, if you're going to have
13 the deployable frame operating as intended, if, for
14 example -- I'm sorry -- the extension failure to
15 operate as intended as a conveyor to take it
16 horizontally up to the silos and receive particles
17 from the bucket elevator, then you would attach it.
18 In order for it to do so, it would have to be
19 attached in some manner.

20 Q. I'm asking if there's a teaching in a prior
21 art of a trust frame attached to the bucket elevator
22 frame that you're relying on to support that
23 sentence?

24 A. No, that's the combination. The sentence
25 is the combination. So we look at Dynatek and we

1 see, for example, that extension conveyor attached to
2 pedestals, or it also discloses derricks, which are
3 very similar to the bucket elevator frame, and we
4 combine that with the teachings of Waldner, for
5 example, Waldner's brackets, links, and pins or
6 similar structures, then the combination says we
7 would attach it. So it looked like Dynatek and
8 Waldner combined. It looked like Dynatek, and it
9 looked like Waldner with a bucket elevator.

10 Q. Okay. But to get back to the specific
11 question I asked, is it correct then that you don't
12 rely on a teaching in the prior art showing a trust
13 frame around a conveyor attached to a bucket elevator
14 frame for that sentence, correct?

15 A. There's no disclosure of that in the prior
16 art. That's the obvious combination.

17 Q. Okay. If you go to paragraph 62, please.

18 A. Okay.

19 Q. Here you're talking about connecting the
20 conveyor system to a transport vehicle, correct?

21 A. Yes.

22 Q. What is the bed of a transport vehicle?

23 A. It's the frame. For example, it would be
24 the frame of the transport vehicle. In the two
25 photos I have here, it's just a frame. There's no

1 decking on the bed, but it's still the bed.

2 Q. So would -- let's look at the picture in --
3 at the end of paragraph 62 for reference purposes.

4 A. Okay.

5 Q. So in that picture, can you identify for me
6 what is the bed of the transport vehicle?

7 A. It would be the area encompassed by the
8 frame is what I'm referring to.

9 Q. "By the frame," are you talking about
10 the -- the horizontal frame members that -- that run
11 the length of the photograph?

12 A. No. No. No. The frame that holds up the
13 gooseneck connection. Not the frame -- not the
14 vertical side rails, the horizontal frame that
15 connects the gooseneck to the side rails.

16 Q. So you're talking about the cross-member
17 between the horizontal rails?

18 A. Right.

19 Q. Okay.

20 A. And that would be analogous to the bed of a
21 pickup truck where the gooseneck would be or the
22 fifth wheel would be, for example.

23 Q. Okay. So that -- that horizontal
24 cross-member is the bed of the transport vehicle?

25 A. Right. In this -- in this picture, that's

1 correct.

2 Q. Okay.

3 A. Yeah. And in the second picture, it's that
4 other horizontal structure that's somewhat larger.

5 Q. So -- so in the second -- in the second
6 picture at the bottom of paragraph 63 that shows the
7 fifth wheel, it would be that horizontal plate
8 spanning the two -- the two rails that in this
9 picture are running vertically, correct?

10 A. Yeah, more or less vertically. Kind of
11 running into the photograph. The side rails are
12 running into the photograph, and the bed would be
13 that horizontal plate that's resting on the side
14 rails.

15 Q. Okay.

16 A. And then the fifth wheel is attached to
17 that. So the point of the discussion is I don't know
18 if you've ever pulled goosenecks and pulled fifth
19 wheels, I've pulled both on multiple occasions, it
20 distributes that load more evenly across that bed or
21 what you call the cross-member or plate, and it makes
22 the ride much more stable and easier to handle.

23 Q. So the 3-inch ball is not the bed of the
24 transport vehicle, correct?

25 A. No, the 3-inch ball is attached to the bed.

1 Q. Okay. And the fifth wheel is not the bed
2 of the transport vehicle, correct?

3 A. That's correct.

4 Q. Okay.

5 MR. NYDEGGER: Thank you. I have no
6 further questions.

7 MS. FLANNERY: If you're okay, Dr. Durham,
8 I've got a couple. We can take a break.

9 THE WITNESS: Let's go ahead.

10 MS. FLANNERY: Just a couple of questions.

11 EXAMINATION

12 BY MS. FLANNERY:

13 Do you recall, earlier in your deposition,
14 counsel for Masaba was asking you about the claims of
15 the '689 patent and whether they claim a method or
16 apparatus? Do you recall that discussion?

17 A. I do.

18 Q. Do you still have the '689 patent open?

19 A. I do.

20 Q. If you could just turn to claim 1 for me.

21 A. Okay.

22 Q. The very beginning of claim 1.

23 A. Okay.

24 Q. Just one moment. I said claim 1. I'm
25 actually going to ask you to look at claim 18. That

1 was my fault.

2 A. Okay.

3 Q. Okay. You see claim 18 reads, "An
4 aggregate-transferring apparatus for elevating and
5 transferring aggregates to elevated locations above a
6 ground surface."

7 Do you see that?

8 A. Yes.

9 Q. Okay. Does the aggregate-transferring
10 apparatus have to be set up in order to elevate and
11 transfer aggregate to an elevated location?

12 MR. NYDEGGER: Objection. Leading.

13 THE WITNESS: I would expect -- yes.
14 That's -- that's the point.

15 Q. (By Ms. Flannery) Okay. Would a POSITA
16 need to know how that aggregate-transferring
17 apparatus is going to be set up in order to design it
18 to perform that function?

19 A. Yes.

20 MR. NYDEGGER: Objection. Leading.

21 THE WITNESS: Sorry about that.

22 Q. (By Ms. Flannery) That's okay. Do you
23 recall -- you can put that patent -- I'm done with
24 that.

25 Do you recall some questions earlier in the

1 deposition today asking whether a person of skill in
2 the art would know the angle of repose for the
3 material that's going to be conveyed when they're
4 designing the system? Do you recall those questions?

5 A. Yes.

6 Q. Okay. Let's assume for the moment that a
7 person of skill in the art designing the system knows
8 the angle of repose for the intended material.

9 A. Okay.

10 Q. After that person has built that system,
11 after the system has been built, is it possible that
12 an operator might try to use that system to elevate
13 and transfer aggregate with a different angle of
14 repose?

15 A. Yes.

16 Q. In that instance, would you assume that the
17 person of skill in the art knew that?

18 A. Well, if he designed it for one purpose and
19 somebody's using it for a different purpose, I
20 wouldn't think he would know that, no.

21 Q. If the operator decided to try to use that
22 system for a different material at a different angle
23 of repose, would you expect that it would operate in
24 the same way as the POSITA who designed the system
25 intended?

1 A. There would be differences in how it
2 operated, certainly. The angle of the chute would
3 have to change -- if it had a higher angle of repose,
4 I'm sorry. Let me get this right. Yes, if it had a
5 higher angle of repose, the chute would have to be
6 steeper.

7 Q. Is it possible in that circumstance that
8 the chute would have to be so steep such that the
9 tower wasn't tall enough to accommodate that for the
10 desired range of motion or the areas where it needed
11 to fill?

12 A. Certainly it's possible.

13 Q. I think, related to this, there were some
14 questions about how systems like Waldner are designed
15 to have a particular operating envelope. Do you
16 recall those questions?

17 A. Yes.

18 Q. And the envelope could be the locations of
19 silos where they would be -- where it would be
20 designed to fill, correct?

21 A. Right. There were two lines of questions,
22 one about the rate, one about the area.

23 Q. Would a POSITA designing a system like
24 Waldner see benefits in a system that had an
25 operating envelope that was wider as compared to a

1 system that had a narrower operating envelope as to
2 area?

3 A. Yes. We talked --

4 MR. NYDEGGER: Objection. Leading.

5 THE WITNESS: I talked about that to some
6 extent particularly in like an L configuration or
7 something like that where the -- the ability to move
8 into areas is advantageous, ability to move in larger
9 areas is advantageous.

10 Q. (By Ms. Flannery) How would a person of
11 skill in the art view the ability to take the same
12 system and have a wider area of silos that it could
13 fill or a wider range of rates that it could
14 accommodate?

15 A. A POSITA would understand that that gives
16 them additional control and applications. As I
17 talked about at some length in the first
18 declaration -- mentioned in the first declaration --
19 I'm sorry -- talked about at some length in the first
20 declaration and mentioned here, they would find that
21 advantageous in order to be able to fill silos, for
22 example, in different configurations, L
23 configuration, maybe ones that are arranged beside or
24 whatever else, and would find it advantageous to fill
25 a larger number or a larger set of silos without

1 having to relocate.

2 Q. Designing it to have those wider areas,
3 could that have some drawbacks?

4 A. Sure. It could.

5 Q. Do those drawbacks mean that a person of
6 skill in the art wouldn't see those benefits?

7 A. No. They would see the benefit and the
8 drawbacks and use engineering judgment how they
9 designed the system.

10 Q. Okay. There were some questions earlier
11 about the telescoping chute in Waldner. I think
12 counsel for Masaba asked about whether that
13 telescoping chute could be designed to have more than
14 two -- more than two telescoping sections.

15 Do you recall that?

16 A. Yes.

17 Q. To be clear, is that configuration
18 disclosed in Waldner?

19 A. No.

20 Q. Okay. If a person of skill in the art
21 modified Waldner to have more than -- more
22 telescoping segments than what it discloses, would
23 that require additional control systems?

24 A. Yes. More complex controls at least.

25 Q. And would there be any other modifications

1 that a person of skill in the art would have to make
2 to accommodate that?

3 A. There may be. That would certainly add a
4 failure point. It would require a different
5 mechanism -- an additional mechanism to articulate
6 that second point or third point depending on how you
7 look at it. So there would be some additional
8 complexities to the control system and an additional
9 failure point at least.

10 Q. Okay. Any other drawbacks that you can
11 think of?

12 A. There's benefits and drawbacks to every
13 decision made.

14 Q. Understood.

15 A. Nothing off the top of my head right now
16 for the short while.

17 Q. Understood. I'm just checking my notes.
18 Let's go to -- I think it's page 36 of your
19 declaration.

20 A. Page 36 or paragraph 36?

21 Q. Page 36, please, where you have an
22 annotated version of Figure 7 of Waldner.

23 Do you see that? Sorry. You're not there
24 yet.

25 A. Page what?

1 Q. Page 36.

2 A. Okay.

3 Q. Sorry. That printed copy has got to be the
4 strangest flips I've ever seen. Sorry for that.

5 Do you recall your discussions with counsel
6 for Masaba about the Figure 7 of Waldner with the
7 annotations being -- with regard to the transport
8 configuration? Do you recall that?

9 A. Yes.

10 Q. Just to be clear, your annotations, your
11 additions are the redlines adding the schematic of
12 the extension -- of the articulated extension
13 conveyor, correct?

14 A. Correct.

15 Q. Okay. How would a person of skill in the
16 art know that the articulated conveyor could be
17 arranged in the way you described, the way you
18 depicted here?

19 A. Well, it's just a matter of physics because
20 the second conveyor is physically below the first
21 conveyor, which gives it its degrees of freedom to
22 double back on itself, if you will.

23 Then you would know in that situation, you
24 could rotate it at any angle you wanted, and it would
25 set down on the -- in this case the trailer

1 structure. And then -- at least that location that's
2 marked with 42 and 44. And could be offset so that
3 it could set all the way down.

4 Q. And is there anything in Dynatek that
5 suggests to a person skill in the art that it could
6 be configured this way?

7 A. Yeah, Dynatek says that second slew joint
8 has at least 330 degrees of rotation, so it can
9 double back on itself and reach those, for example,
10 the drawings I have on page 18. Maybe not that one.
11 Maybe the ones on -- yeah, the ones on 16 show
12 that -- almost that exact configuration reaching that
13 first silo.

14 MS. FLANNERY: I don't think I have any
15 further questions. Pass the witness.

16 EXAMINATION

17 BY MR. NYDEGGER:

18 Q. Just one question.

19 Does Dynatek disclose any configuration for
20 transport?

21 A. No. That's the combination.

22 Q. In fact, Dynatek is not, standing alone,
23 intended to be transported to different sites,
24 it's -- it's installed permanently, correct?

25 MS. FLANNERY: Object to form.

1 THE WITNESS: I don't know that you can
2 make that argument based on Dynatek's disclosure that
3 they can engineer any solution or engineer attachment
4 to any structure. But it is not explicitly
5 disclosed, for sure.

6 Q. (By Mr. Nydegger) The Dynatek reference
7 shows Dynatek mounted to a cement pillar, correct?

8 A. Correct. That's one -- that's one thing it
9 says.

10 Q. Does it disclose any other mounting?

11 A. Yes, sir.

12 Q. What does it disclose?

13 A. As I recall, there's derrick
14 configurations, platform configurations. I don't
15 recall all of them. But they were called out in my
16 first declaration, and also says they provide
17 engineering surfaces to attach it to any structure --
18 to the customer's structure, custom engineered
19 solutions.

20 Q. Did it disclose that any of those
21 structures were transportable?

22 A. The same answer before. No, it doesn't
23 disclose that. That's the combination.

24 Q. Okay.

25 MR. NYDEGGER: No further questions.

1 (The proceedings concluded at 12:43 p.m.)

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103. 17. “Surfaces” to “services”

I, Dr. Robert Durham, deponent herein, do hereby certify and declare under penalty of perjury the within and foregoing transcription to be my deposition in said action; that I have read, corrected, and do hereby affix my signature to said deposition.

Masaba Exhibit 2040 - 105
Solaris Oilfield et al. v. Masaba
IPR2024-01179

1 REPORTER'S CERTIFICATE

2 STATE OF UTAH)

3 COUNTY OF UTAH)

4

5 I, Daren S. Bloxham, a Certified Shorthand
6 Reporter, Registered Professional Reporter, hereby
7 certify:

8 THAT the foregoing proceedings were taken
9 before me at the time and place set forth in the
10 caption hereof; that the witness was placed under
11 oath to tell the truth, the whole truth, and nothing
12 but the truth; that the proceedings were taken down
13 by me in shorthand and thereafter my notes were
14 transcribed through computer-aided transcription; and
15 the foregoing transcript constitutes a full, true,
16 and accurate record of such testimony adduced and
17 oral proceedings had, and of the whole thereof.

18 I further certify that a reading copy of the
19 same was delivered to the witness, through their counsel,
20 Ms. Flannery, for the reading and signature.

21 I have subscribed my name on this 9th day
22 of September, 2025.

23

24 Daren S. Bloxham
25 Registered Professional Reporter #335

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