

1 IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

2
3 BEFORE THE PATENT TRIAL AND APPEAL BOARD

4
5 SOLARIS OILFIELD SITE SERVICES OPERATING, LLC and
6 SOLARIS OILFIELD SITE SERVICES PERSONNEL, LLC,
7 Petitioners,

8 vs.

9 MASABA, INC.,
10 Patent Owner.

11 Case No. IPR2024-01179
12 Patent No. 11,780,689
13 Issue Date: October 10, 2023

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17 ORAL DEPOSITION OF DR. ROBERT DURHAM, produced
18 as a witness at the instance of the Patent Owner, and
19 duly sworn, was taken in the above-styled and numbered
20 cause on March 26, 2025, from 9:21 a.m. to 2:32 p.m.,
21 Nilda Codina, Notary Public in and for the State of
22 Texas, recorded by machine shorthand, from Baker Botts,
23 L.L.P., 910 Louisiana Street, Houston, Texas, 77002
24 County of Harris, pursuant to the Federal Rules of
25 Civil Procedure, and the provisions stated on the
record or attached hereto.

1 A-P-P-E-A-R-A-N-C-E-S

2

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18 ALSO PRESENT: Bryan Housman, co-counsel

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

2 THE REPORTER: Today's date is March
3 26, 2025. The time is now 9:21 a.m. If counsel and all
4 parties would please state their appearances for the
5 record with the exception of the witness, you don't
6 have to do that.

7 MR. NYDEGGER: Chad Nydegger from
8 Workman Nydegger representing the Patent Owner, Masaba.

9 MS. FLANNERY: Liz Flannery from Baker
10 Botts representing the Petitioners and here with me
11 also is Brian Jausman also at Baker Botts.

12 DR. ROBERT ALLAN DURHAM,
13 Having been first duly sworn, was examined and
14 testified as follows:

15 DIRECT EXAMINATION

16 BY MR. NYDEGGER:

17 Q. Good morning, Dr. Durham.

18 A. Morning.

19 Q. Dr. Durham, will you please state your name
20 for the record.

21 A. Sure. Robert Allan, A-L-L-A-N, Durham.

22 Q. Thank you. Could you also please provide
23 your address.

24 A. Yeah, the 17350 East Highway 64, Bixby,
25 Oklahoma 74008.

1 Q. Thank you. Dr. Durham, I'm going to go over
2 just a few ground rules for a deposition, if that's all
3 right. During the deposition, if you don't understand
4 a question, please feel free to ask me to restate it.
5 If you don't ask me to restate the question, then the
6 record will reflect that you understood the question
7 and answered the question that was asked; do you
8 understand that?

9 A. Yes.

10 Q. As for breaks, anytime you feel that you are
11 going to need a break, just let me know and I'll find a
12 stopping point for us to take a break, okay?

13 A. Yes.

14 Q. And during the deposition, counsel may lodge
15 objections; however, you're to answer the question that
16 was asked unless you are specifically instructed not to
17 answer; do you understand that?

18 A. Yes.

19 Q. Okay. And where as you're now under oath,
20 I'm entitled to discover any communications that you
21 have with your counsel during the deposition while
22 you're under oath, including conversations during
23 breaks or lunch of that; do you understand that?

24 A. Generally, yes.

25 Q. Okay. Dr. Durham, you've been retained by

1 Solaris to testify in this matter, correct?

2 A. Yes, that's correct.

3 Q. Have you been retained by Solaris in
4 connection with any other matters?

5 A. No.

6 Q. What did you do to prepare for your
7 deposition today?

8 A. I reviewed my declaration, the references
9 that I used in my declaration, some of the file
10 history. I think that's it, and met with counsel for a
11 few hours yesterday.

12 Q. Okay. Approximately how much time did you
13 spend preparing for your deposition?

14 A. Oh, portions of four days.

15 Q. Okay. And so is it fair to say the contents
16 of your declarations submitted in this case and, as you
17 mentioned, the prior art references you relied on in
18 that declaration are fairly fresh in your memory?

19 A. Fairly so. Yes, sir.

20 Q. Okay. Could you please provide any concrete
21 examples you have from your electrical engineering
22 curriculum or projects that directly address the
23 mechanical engineering challenges associated with
24 conveying and storing bulk solid material such as
25 aggregate?

1 MS. FLANNERY: Object to form.

2 A. Generally speaking, the statics courses I
3 took, of course, would address some of that. As far as
4 formal education, some of the instrumentation courses
5 would address some of those issues as well. But large,
6 my experience in those issues has been over the last 30
7 plus years, seeing things in the field.

8 Q. (BY MR. NYDEGGER) Okay. So do you have any
9 concrete examples of curriculum that addresses those
10 specific challenges related to conveying aggregates --

11 MS. FLANNERY: Object to form.

12 A. Yes. As I said, statics, courses I took and
13 instrumentation course I took.

14 Q. (BY MR. NYDEGGER) How many statics courses
15 did you take?

16 A. Statics. One course.

17 Q. One course.

18 A. Yes.

19 Q. Okay. Sure. And instrumentation courses?

20 A. Again -- well, I think there were two of
21 those. One or two, it's been 30 plus years. I can't
22 remember exactly.

23 Q. Understandable. Can you provide any concrete
24 examples from your master of engineering curriculum or
25 projects that directly address the mechanical

1 engineering challenges associated with conveying
2 aggregates?

3 MS. FLANNERY: Object to form.

4 A. Probably couldn't. Again, 30 years, it's
5 hard to remember all I took.

6 Q. (BY MR. NYDEGGER) Okay. And then the same
7 question with regard to your technology management
8 degree, can you provide any concrete examples from your
9 technology management curriculum or projects that
10 directly address the specific mechanical engineering
11 challenges associated with the conveying aggregates?

12 MS. FLANNERY: Object to form.

13 A. Well, to the extent -- and, again, I don't
14 want to take issue with your question, but I'm not sure
15 it's all mechanical engineering. I think some of it
16 has to do with structural issues as well.

17 As I said, the statics and those are
18 structural issues, but, again, probably not from a PHD
19 program; it was much more narrow.

20 Q. (BY MR. NYDEGGER) Okay. And including not
21 just the mechanical engineering challenges, but then
22 also structural engineering challenges associated with
23 conveying aggregate materials, would that change your
24 answers?

25 A. No, it wouldn't.

1 Q. Okay.

2 A. The backgrounds in statics and then 30 plus
3 years of -- I hope I know more now than when I did when
4 I graduated.

5 Q. Okay. And can you provide any concrete
6 examples from your PHD and engineering management
7 curriculum projects that directly address the
8 mechanical or structural engineering challenges
9 associated with conveying aggregate materials?

10 MS. FLANNERY: Object to form.

11 A. I thought we just said that, but the answer's
12 still the same. No. It was very narrow.

13 Q. (BY MR. NYDEGGER) Okay.

14 A. Or fairly narrow.

15 Q. You worked at South Central West from
16 approximately 1989 to 2000, correct?

17 A. Central and Southwest?

18 Q. Yes.

19 A. Yes, Central and Southwest.

20 Q. Do you work on any conveyor systems for
21 aggregates essential to Southwest?

22 A. Yes.

23 Q. And can you explain to me your experience
24 there?

25 A. Yes, I was dealing with control systems for

1 conveying system, conveying coal into a silo for coal
2 storage and grinding in the coal power plant.

3 Q. And what specifically was your responsibility
4 in connection with those systems?

5 A. Control systems design. So in control system
6 design, you have to understand the entire operating
7 system in order to design the control system properly.

8 Speed control, volume control, we have
9 different ways that the operators could operate that,
10 fairly new at the time.

11 Q. Okay. So it was more on the -- was it fair
12 to say it was more on the electronical side of the
13 controls?

14 MS. FLANNERY: Object to form.

15 A. No, physical controls as well in the field.

16 Q. (BY MR. NYDEGGER) Okay.

17 A. Physical control and the speed of the
18 conveyors, physical controlling or measuring the
19 volume, those kind of things.

20 Q. Okay. And how much of your time was spent in
21 connection with those conveyor systems?

22 A. I think that probably was a four- or
23 five-month project, something like that.

24 Q. Okay.

25 A. Again, you're asking me to go back 25 plus

1 years, but that's about right.

2 Q. So was it one project then?

3 A. Yes, on the conveyor system, one project.

4 Q. Okay. And then you worked at New Dominion,
5 LLC, from 2000 to 2002, correct?

6 A. Correct.

7 Q. And at New Dominion, LLC, did you work on any
8 conveyor systems for aggregates?

9 A. No, I obviously saw them regularly at the
10 fracturing sites and understood how they worked
11 clearly. But, no, I didn't physically work on them.

12 Q. And then you worked at EDG Power Group from
13 2002 to 2004, correct?

14 A. Correct.

15 Q. And while you were working at EDG Power, did
16 you work on any conveyor systems for aggregates?

17 A. I don't believe so. No. I can't recall any.

18 Q. You worked at THEWAY Corporation from 2004 to
19 2022, correct?

20 A. 2025.

21 Q. 2025?

22 A. Yes, sir.

23 Q. Okay. Are you still with THEWAY Group?

24 A. Yes, sir. THEWAY Labs. We re-branded ten
25 years or so ago.

1 Q. Okay. And in connection with your work at
2 THEWAY Corp., have you worked on any conveyor systems
3 for aggregates?

4 A. I've worked with fracturing systems again
5 dozens of times over those years. Physically handling
6 the conveyors, no. That's generally, as you know, a
7 service company project. But I've witnessed them. I
8 understand how they operate in the field. I've had to
9 interface with the operator of them -- sorry, the
10 service companies and seeing those operate. Like I
11 said, many times over those years, but I don't
12 physically work on much anymore.

13 Q. Okay. And then you worked at D Square
14 Technical Solutions from 2002 to 2022, correct?

15 A. 2025.

16 Q. Okay.

17 A. Again, yeah, these -- Tour Tech Solutions is
18 my employer and I'm contracted to THEWAY Labs.

19 Q. Okay.

20 (Reporter clarification.)

21 A. Sure. D Square Tech Solutions is my employer
22 and I'm contracted to THEWAY Labs and have been over
23 the last 20 plus years.

24 (Reporter clarification.)

25 A. T-H-E-W-A-Y.

1 Q. (BY MR. NYDEGGER) And so your work for D2
2 Tech Solutions, does that directly overlap with your
3 work for THEWAY?

4 A. It's a superset of that work, but, yes.

5 Q. Okay. With your other work with D Squared
6 Tech Solutions, did you -- have you worked on any
7 conveyor systems for aggregates?

8 A. No, sir.

9 Q. Have you had any direct experience managing
10 or actively participating on engineering teams
11 specifically focused on the design, manufacture or
12 testing of aggregate handling equipment?

13 A. Other than the example I gave earlier, the
14 control system, no.

15 Q. Okay. And that example that you gave at
16 Control Systems, what was your position there?

17 A. Controls engineer.

18 Q. Controls engineer?

19 A. Uh-huh.

20 Q. And did you supervise other engineers in that
21 capacity?

22 A. No.

23 Q. Were you supervised by other engineers in
24 that capacity?

25 A. Certainly.

1 Q. How long after your education was that?

2 A. It would have been in the years between
3 '92 -- between '92 and '94. '94, I transitioned into
4 another role.

5 Q. Okay. When you say you transitioned to
6 another world in '94 --

7 A. Another role.

8 Q. -- another role?

9 A. Yes, sir.

10 Q. Okay. Can you point to any specific
11 publications or professional activities that
12 demonstrate your detailed understanding of the unique
13 engineering principals and practices involved in
14 designing and manufacturing solutions for conveying and
15 storing aggregates?

16 A. No --

17 MS. FLANNERY: Object to form.

18 A. -- I disagree with the premise of your
19 question.

20 Q. (BY MR. NYDEGGER) Okay. Please explain.

21 A. They're not unique challenges.

22 Q. They're not unique in any way?

23 A. Not really. No, sir. Just standard
24 engineering challenges.

25 Q. So can you identify any publications or

1 professional activities that demonstrate your
2 understanding of the principles and practices involved
3 in designing and implementing conveyor systems for
4 storing aggregates?

5 MS. FLANNERY: Objection to form.
6 Go ahead.

7 A. Sure. If you have a copy of my CV, I can
8 review my publications and see which might fit.

9 Q. (BY MR. NYDEGGER) Sure. This has been
10 previously marked in this matter as Exhibit 1002. This
11 is a copy of your CV.

12 (Exhibit No. 1002 marked.)

13 A. Thank you. There's one, maybe not a
14 publication, but an example in my CV. One of my areas
15 of specialization is electrical mechanical energy
16 conversion, and, of course, that's very often the case
17 in conveyor systems. A lot of conveyor systems use
18 electric motors for their driving mechanism. So that,
19 of course, area specialization would apply.

20 Q. (BY MR. NYDEGGER) Are those electrical motors
21 used in such systems unique in any way to those
22 systems, or are they standard, off-the-shelf type of
23 motors --

24 MS. FLANNERY: Object to -- give me a
25 minute, okay.

1 A. Sure. Sorry.

2 No. They're standard induction motors, the
3 ones I've seen.

4 There are quite a few of my papers that have
5 to do with publications that have to do with grounding
6 and hostile environments or hazardous environments,
7 meaning petroleum facilities primarily, although the
8 field still apply for like coal handling as well. So
9 any of those may apply given the hazardous environment
10 around an oil and gas well, if we're talking about
11 aggregate at an oil and gas well such as a fracturing
12 site.

13 Q. (BY MR. NYDEGGER) Those publications
14 regarding grounding are publications that demonstrate
15 your understanding of the engineering principle used
16 for aggregate systems?

17 A. Sure. Yes, to the extent that those
18 aggregate systems use electric motors, those principles
19 apply.

20 Q. Okay. So the principles of grounding apply?

21 A. Uh-huh.

22 Q. Okay.

23 A. Yes, sir. I think those are the ones that
24 apply most -- most accurately, meaning really when
25 you're talking about an engineering practice, the

1 principles are the same regardless, so there could be
2 various aspects of aggregate handling systems that are
3 addressed and several of the other publications, but
4 they don't come to mind immediately.

5 Q. Okay. And going back to the project you
6 worked on at, that was when you were with Central and
7 Southwest, correct?

8 A. Yes, sir.

9 Q. And you mentioned that you worked on the
10 controls capacity system, correct?

11 A. Correct. Well, I designed and built the
12 controls.

13 Q. Okay. Were you involved in design or
14 construction of the structural components of the
15 conveyor system?

16 A. No, sir.

17 Q. Were you involved in selecting the conveyor
18 type?

19 A. No, the conveyor existed already.

20 Q. The conveyor existed already?

21 A. Yes, sir.

22 Q. So can you give me more detail about the
23 specific control systems that you worked on?

24 A. Well, I designed the control system to
25 control the conveyor. We changed -- we added in -- let

1 me give you a little background.

2 Historical conveyor was run strictly by speed
3 and speed doesn't provide a constant volume of
4 aggregate, in that case, coal, to the silos depending
5 on various conditions such as the weight of the
6 aggregate, how much moisture's in it. How it -- the
7 buckets go to pick it up. Various factors can affect
8 that, which affects, of course, the level in the silo
9 and required, not constant, but regular adjustment by
10 the operator to control how much volume was in the
11 silos.

12 So the control systems I built use sensors,
13 weight sensors and optical sensors to determine the
14 actual volume of coal going into the conveyor system,
15 and also interfaced with the level of the silo so that
16 we could adjust -- the system adjusted the speed of the
17 conveyor in order to maintain a sufficient volume to
18 maintain level in the silo.

19 Q. Okay.

20 A. So in designing that, I had to understand an
21 awful lot about the conveyor system. Basically,
22 everything about how the conveyor system operated in
23 order to build that control system properly.

24 Q. Okay. Thank you, I appreciate that.

25 So if I understand correctly, your -- the

1 conveyor system that you worked on was an already
2 existing conveyor systems, correct?

3 A. Yes. Yes, it existed since the beginning of
4 the plant.

5 Q. And your project was to design and implement
6 sensors that would monitor the volume of material that
7 was actually being moved by the conveyor and correlate
8 that with the fill level of the silo so that the
9 adjustments could made on the speed of the conveyor to
10 account for fluctuations in the volume; is that a
11 fairly accurate understanding --

12 MS. FLANNERY: Sorry, object to form.

13 A. That's generally accurate, yes.

14 Q. (BY MR. NYDEGGER) Okay. Thank you.

15 Do you have any direct experience dealing
16 with the physical properties of different types of
17 aggregates such as sand, gravel, crushed stone used
18 that are conveyed by conveyor systems for aggregates?

19 A. Yes.

20 Q. Please provide that experience.

21 A. I've dealt with gravel and construction of
22 roads. I've dealt with sand, obviously, in connection
23 with -- or sand in different province, primarily sand
24 in various providence in oil and gas fracturing
25 operations which is directly applicable to these

1 patents. The various mesh sizes and how you specify
2 those for the properties, you need downhole to prop
3 open the fractures, as I said, coal. We talked about
4 that some.

5 I think gravel, sand, and coal are probably
6 the most common ones I've dealt with. Sand, probably
7 the most common, fracturing sand or province.

8 Q. And your experience with fracturing sand,
9 what were your roles and responsibilities with regard
10 to the fracturing sand?

11 A. Primarily specifying the fracturing sand that
12 should be used in the fracturing systems what sieve
13 level or mesh levels that would be used. So to
14 understand that, you have to understand, you know, what
15 sizes were there, mass, how it's suspended in the
16 fluid, things like that.

17 Q. Okay. And in connection with gravel, was
18 that -- did that work involve conveyor systems?

19 A. It has, yes. Delivery of gravel sometimes is
20 in a conveyor, sometimes in trucks.

21 Q. Okay. And explain to me your experience in
22 connection with the gravel.

23 A. Building roads.

24 Q. And so on the projects you worked on, the
25 gravel was conveyed to the roadside by a conveyor?

1 A. Sometimes, yeah. Sometimes in muddy
2 locations, they would deliver it by conveyor to get it
3 closer on site for us to spread it. But oftentime,
4 trucks. But I would say more than seldom on conveyors.

5 Q. Okay. And were you involved with conveyor
6 systems on those projects that used gravel to convey --
7 sorry -- that use conveyors to convey gravel to
8 roadsides?

9 A. Oh, yes. By being involved with the project,
10 you're involved with the conveyor systems, certainly.

11 Q. And what -- explain to me your direct work
12 with those conveyor systems.

13 A. I was a customer.

14 Q. And when you say the customer, you hired
15 somebody out?

16 A. We receive the gravel.

17 Q. Okay. And who was operating the conveyor
18 systems?

19 A. The gravel company.

20 Q. Okay. Do you have any direct experience in
21 designing or modifying conveyor systems to control
22 dust?

23 A. No, not direct experience.

24 Q. To your knowledge, what was the general
25 attitude in the oil and gas industry towards belt

1 conveyors as compared to bucket conveyors at the time
2 of the invention of the 689 Patent?

3 MS. FLANNERY: Object to form.

4 A. If you have a copy of my declaration, I'd
5 like to remind myself of the priority date.

6 Q. (BY MR. NYDEGGER) Certainly.

7 A. I have a general recollection but I want to
8 make sure I'm sure.

9 Q. Would you prefer a copy of the 689 Patent or
10 your declaration?

11 A. Declaration.

12 Q. This was previously marked in this matter as
13 Exhibit 1003.

14 (Exhibit No. 1003 marked.)

15 A. Thank you.

16 MS. FLANNERY: I don't need a copy
17 Chad, I've got it. I'm good.

18 A. Okay. 2021. Certainly in my experience,
19 belt conveyors have been more common than bucket
20 conveyors, historically. I think those attitudes
21 probably started changing after OSHA issued some
22 guidance on silica dust where the open-belt type
23 conveyors were deprecated because of their exposure of
24 silica dust to workers as, you know, wind or whatever
25 would carry the dust away.

1 But, in my experience, the majority of
2 things -- the majority of the conveyor systems I had
3 seen up prior to that point had been belt conveyors
4 rather than vertical bucket conveyors. Maybe that's a
5 result of most of my experience being in West Texas
6 where land use is -- pad size is not as much of a
7 concern as, say, Colorado. But by the time I
8 experienced those areas, kind of the industry shifted
9 away from belt conveyors just in general, conveying
10 systems in general.

11 Q. (BY MR. NYDEGGER) You mentioned regulations
12 that came out by OSHA, correct?

13 A. Guidance, not regulations.

14 Q. Okay. Guidance. Okay.

15 A. Yes, sir.

16 Q. Thank you. When did that guidance come out?

17 A. I think I may have referenced it somewhere in
18 my declaration, but I'm thinking that was early to
19 mid-2010's timeframe.

20 Q. Okay. Do you have any understanding as to
21 why belt conveyors were more prevalent in the oil and
22 gas industry as compared to bucket conveyors prior to
23 that time?

24 MS. FLANNERY: Object to form.

25 A. Yes.

1 Q. (BY MR. NYDEGGER) And what is that
2 understanding based on?

3 A. They're easier.

4 Q. Can you provide anymore detail other than
5 easier?

6 A. It's just easier to construct and build a
7 belt conveyor, an incline belt conveyor than a vertical
8 bucket conveyor system. You have fewer challenges.
9 It's a, say, simpler design problem, if you will, to
10 make an incline belt conveyor as opposed to a vertical
11 bucket conveyor.

12 Q. Okay.

13 A. You can distribute the loads over a larger
14 distance.

15 Q. Thank you. In Paragraph 3 of your report you
16 state that, "I relied upon my knowledge, training and
17 experience in the relevant art."

18 A. Yes, sir.

19 Q. What is the relevant art as you referenced in
20 that paragraph?

21 A. Aggregate handling systems, specific with the
22 references that I refer to in my declaration but
23 generally speaking, aggregate handling systems.

24 Q. When you say specifically to the references
25 identified in your declaration, what references are you

1 referring to?

2 A. The art that I refer to in my declaration.

3 Q. Are you referring to the prior art
4 references?

5 A. Yes, the prior art references.

6 Q. Okay.

7 A. And, well, not just the prior art references,
8 also those references contained in my background in
9 state of the art section, which were obviously more
10 than just the prior art references.

11 Q. And the references that you just referenced
12 in connection with your background, explain to me more
13 precisely what those references are.

14 Maybe I can simplify this. Are you referring
15 to the prior art references that you use as
16 establishing background for the art; or are you
17 referring to background references in connection with
18 your education and experience?

19 A. Well, there's the ones I'm talking about
20 there, there's a section of my declaration start as
21 section Roman numeral VIII that talks about technology
22 background and the state of the art prior to the 689
23 Patent.

24 So I'm distinguishing those and maybe it's
25 incorrect to distinguish them in my mind, but I

1 distinguish those from the actual prior art references
2 I used in the grounds.

3 Q. Okay. I understand now, that's fine. Thank
4 you.

5 Is it your opinion that direct engineering
6 experience with equipment for conveying aggregates is a
7 requirement to be considered person of ordinary skill
8 in the art relevant to the 689 Patent?

9 A. My understanding of the level of ordinary
10 skill in the art is a person with, generally, a -- an
11 engineering degree and at least two years' experience
12 working in an industry or field that involves handling
13 of particulate materials, which may include operations
14 in the oil and gas industry that involve the handling
15 of such materials.

16 Q. I understand that's what you wrote in your
17 report.

18 A. Uh-huh.

19 Q. My question is a little different. My
20 question is, whether it's your opinion that directing
21 an engineering experience with systems for conveying
22 aggregate is a requirement to be considered a person of
23 ordinary skill in the art relevant to the 689 Patent?

24 MS. FLANNERY: Object to form.

25 A. I think I will stick with what I wrote in the

1 declaration. Because I think what I wrote in the
2 declaration is maybe broader than what you're trying to
3 ask. I'm not sure what you mean by direct engineering
4 experience, but it seems like my understanding of what
5 a person of ordinary skill in the art will be broader
6 than what the question you're trying to ask.

7 Q. (BY MR. NYDEGGER) Okay. Let's take an
8 example. Let's take somebody who is a mechanical
9 engineer and has been working at an oil refinery for
10 two years.

11 A. Okay.

12 Q. Is that person in your opinion a person of
13 ordinary skill in the art of the 689 Patent?

14 A. It depends on what portion of the refinery
15 they're working in. If they're working in the area of
16 the coker, where you have conveyor systems that handle
17 core aggregate, then probably yes.

18 Q. Let's say they're working in another area.
19 So they're an engineer, they have two years of
20 experience in the oil and gas industry, but they've
21 been working in an area of the oil and gas industry
22 that does not use conveyor systems.

23 A. Well, if they're working in area of the oil
24 and gas industry that does not have conveyor systems,
25 that would be no.

1 Q. But under the definition that you have in
2 your declaration, that person would still qualify under
3 that definition as stated in your declaration because
4 they have two years' of experience in the oil and gas
5 industry, correct?

6 A. No, sir. I disagree.

7 Q. Where in that statement does it require
8 specific -- specific experience with conveyor systems?

9 A. Which may include operations in the oil and
10 gas industry that involve the handling of such
11 materials, meaning particulate materials.

12 Q. Okay. So let's take somebody who is an
13 engineer working in the oil and gas industry, and they
14 are working in an area of the oil and gas industry
15 where particulate materials are brought in by truck, no
16 conveyor systems, would that person qualify?

17 A. Probably under this definition, yes.

18 Q. Okay. So somebody with no experience or
19 interaction with conveyor systems under your definition
20 of a person with ordinary skill in this 689 Patent
21 could qualify?

22 A. Yes, I think they could understand the art,
23 yes.

24 Q. Okay. In Paragraph 3 you state that -- your
25 CV lists publications on which you're a named author

1 and identifies parties on behalf of whom I've
2 previously provided expert testimony in the past four
3 years. Could you point me to the portion of your CV
4 where you identify where you've provided expert
5 experience?

6 A. To the extent that wasn't provided as part of
7 the exhibit, I don't see that in this Exhibit 1002. If
8 it wasn't provided as part of the exhibit, I don't
9 understand why not. Because I certainly provided it to
10 counsel, but it doesn't appear to be in Exhibit 1002.

11 Q. Okay. So that statement in Paragraph 3 is
12 not correct?

13 A. Apparently not.

14 Q. So can you provide me with your prior
15 experience in the last four years providing expert
16 testimony?

17 A. Not without documentation, no, sir. There's
18 no way.

19 Q. Okay. Have you provided expert testimony in
20 any matters that involved conveyor systems?

21 A. Yes.

22 Q. In the last four years?

23 A. Yes, sir.

24 Q. Can you identify those matters?

25 A. I've testified multiple times when fracturing

1 technologies and at least up until maybe the last eight
2 years or so conveyor systems -- well, maybe shorter
3 than that, maybe six years, conveyor systems were used
4 on every fracturing site.

5 Q. Okay. And the testimony that you provided in
6 those matters, did you testify regarding the conveyor
7 systems?

8 A. I certainly addressed those conveyor systems
9 in my declarations in those matters, yes, sir.

10 Q. In what way?

11 A. In explaining the state of the art
12 fracturing.

13 Q. And so you would explain that conveyor
14 systems are used to convey the aggregate?

15 A. Yes. And various methods, including dust
16 control or some of those areas.

17 Q. Okay. Can you explain to me any -- any
18 testimony that you gave directed specifically at the
19 conveyor -- at the conveying of aggregate by the
20 conveyor systems in those matters?

21 A. Yes, generally, testified about some matters
22 involving dust control and dust control directly
23 involves the conveying systems because --

24 Q. Well, what were the issues --

25 MS. FLANNERY: Let him finish his

1 answer.

2 A. The issues are dust control and why the
3 industry was moving to various methods for controlling
4 worker exposure to silica dust and so that necessarily
5 involved the conveying systems.

6 Q. (BY MR. NYDEGGER) Was this testimony done in
7 connection with a lawsuit?

8 A. Some type of matter. I don't recall if it
9 was a district court case or an IPR. I believe it was
10 IPRs.

11 Q. And were the patents at issue in that IPR
12 directed towards -- were they patents on conveyor
13 systems?

14 A. Aggregate handling including conveying
15 systems, yes, sir, silos and dust control.

16 Q. So you've broaden my question to aggregate
17 handling. I'm not talking about aggregate handling in
18 the total. I'm talking were the patents directed
19 towards conveyor systems that were at issue in the
20 matter you testified for?

21 A. Conveyor systems were certainly involved. I
22 don't recall exactly what the claims were, but
23 conveying systems were certainly involved. The
24 testimony was directed towards reasons for controlling
25 worker exposure to dust, which necessarily involves the

1 conveying systems. Now, what the actual claims were at
2 the time, I can't recall.

3 Q. Okay.

4 A. It's been too many years.

5 Q. In Paragraph 4 of your report, you talk
6 about, "The electrification of the oil and gas industry
7 from drilling and completion to downstream."

8 A. Yes, sir.

9 Q. Do you see that?

10 A. Yes, sir.

11 Q. Can you please explain to me what the
12 electrification of the oil and gas industry refers to?

13 A. Yes, sir. Electrification is a broad term
14 that refers to replacing mechanically driven equipment,
15 hydraulically driven equipment with electrically driven
16 equipment for various reasons; compactness, ease of
17 operation, ease of maintenance, environmental
18 considerations, et cetera. But it's been a movement
19 probably for about 70 years or so in the oil and gas
20 industry but really ramped in the past 15 years or so,
21 20 years.

22 Q. Okay. And as part of the electrification of
23 oil and gas industry, have you designed any
24 electrification, modifications for conveyor systems?

25 A. No, I think we talked about that earlier.

1 Q. In your expert report you mention that you
2 held various leadership positions with the Petroleum
3 and Chemical Industry Committee or PCIC and -- of the
4 Institute of Electrical Electronics Engineers from 2005
5 to 2012; is that correct?

6 A. I think if you read the rest of the paragraph
7 it's all the way to the present day, from 2005 to the
8 present day.

9 Q. Okay.

10 A. I was standards chair -- I'm sorry, I was
11 production officer, production subcommittee officer
12 from 2005 to 2012.

13 (Reporter clarification.)

14 Q. (BY MR. NYDEGGER) I believe in your report
15 you sort of break out your leadership positions with
16 the PCIC and then later you talk about your leadership
17 positions in the standards subcommittee and the
18 standards subcommittee of the PCIC, 2013 to 2022.

19 A. Correct. And then I go on to say I'm now in
20 an executive officer role at the PCIC.

21 Q. Okay.

22 A. That will continue till about 2030 or so.

23 Q. Okay. Great. So first you address the time
24 period of 2005 to 2012 and you reference various
25 leadership positions, correct?

1 A. Yes.

2 Q. Okay. And in your activities with -- during
3 that time period of 2005 to 2012, can you explain to me
4 any specific matters you dealt with concerning directly
5 conveyor systems?

6 MS. FLANNERY: Object to form.

7 A. Not in those roles 2005 to 2012. That was
8 production subcommittee which is generally not
9 concerned with a conveying systems.

10 Q. (BY MR. NYDEGGER) Okay.

11 A. Of particulate matter at least.

12 Q. Okay. And then you reference various
13 leadership positions in the standard subcommittee at
14 the PCIC from 2013 to 2022, but that -- does that go
15 through 2025 now?

16 A. No, 2022.

17 Q. Okay. And so same question for that time
18 period.

19 A. There's direct roles in that some of the
20 standards we dealt with dealt with electrical equipment
21 in hazardous locations, again; motors, switch gear,
22 those kind of things which would all be involved in
23 conveying systems at an oil and gas facility.

24 The standards themselves from not directing
25 solely to conveying systems, but certainly those

1 standards apply to conveying systems as used in the oil
2 and gas industry.

3 Q. So would it be fair to say that the standards
4 you dealt with were for things like motors or
5 components that could have application in a lot of
6 different areas including conveyor systems?

7 MS. FLANNERY: Object to form.

8 A. Well, they would have application to
9 conveying systems used in a hazardous location directly
10 would be, not could be.

11 Q. (BY MR. NYDEGGER) Okay. So -- but is it
12 still correct that the standards you worked on were for
13 general components?

14 A. Yes.

15 MS. FLANNERY: Object to form.

16 A. Yes. As we talked earlier, the motors used
17 are generally off the shelf or standard type motors.
18 We don't design a motor for a conveying system.

19 Q. (BY MR. NYDEGGER) Okay. And other than
20 motors, did you work on standards for other equipment?

21 A. Yes, sir.

22 Q. Can you just provide me with a list, please?

23 A. I can give you some examples.

24 Q. Okay.

25 A. Switch gear, for example, controls mechanisms

1 for controlling the starting, stopping the motors,
2 variable frequency or adjustable speed drives. Those
3 are some examples I can think of.

4 Q. Okay. You mention that the PCIC standard
5 subcommittee sponsors nearly 50 electrical and oil and
6 gas related standards?

7 A. Right, I need to update that because we're
8 over 50 now, but, yes.

9 Q. Okay. Are any of those standards directed
10 specifically towards conveyor systems towards
11 aggregates?

12 MS. FLANNERY: Object to form.

13 A. As I just said, no, they are not limited to
14 conveying systems.

15 Q. (BY MR. NYDEGGER) Those are standards for
16 general components that would be used in conveyor
17 systems, correct?

18 A. Yes, sir.

19 Q. Okay. And then you also state that the
20 production subcommittee is the primary method for PCIC
21 members to communicate technical papers related to
22 drilling wellhead and facility operations of oil and
23 gas wells. Do you see that?

24 A. Yes, sir.

25 Q. What was your role related to those technical

1 papers?

2 A. I, in various methods, supervised or reviewed
3 or contributed to the selection of the papers that
4 would be reviewed and presented.

5 Q. Okay.

6 A. So that role is a management -- those roles
7 that I held were essentially management of those
8 technical committees making sure that they're properly
9 peer-reviewed -- I'm sorry -- those technical papers,
10 making sure that they're properly peer-reviewed and
11 that they're organized appropriately, et cetera.

12 Q. Okay. So is it correct that you were not
13 drafting any of those technical papers?

14 A. Well, at that timeframe, I drafted several
15 technical papers that were produced in production
16 subcommittee but not as a result of that role.

17 Q. Okay.

18 A. A result of my being an author.

19 Q. Okay. And are those technical papers listed
20 on your CV?

21 A. Yes, they are.

22 Q. Okay. And in your roles on that production
23 subcommittee, how many technical papers did you review
24 that were specifically directed towards aggregate
25 conveying systems?

1 A. I couldn't answer that. There's no way I can
2 answer that. I seem to remember some, but it's been
3 nearly 20 years.

4 Q. Okay. And then are you currently an
5 executive officer of the PCIC?

6 A. Yes, sir.

7 Q. What are your responsibilities in that role?

8 A. Various roles. I'm currently the vice chair,
9 which, again, is in charge of the general program and
10 manage an entire technical program for the conference,
11 so kind of as a management role for all those
12 subcommittees developing technical papers as well as
13 the papers that are presented in the general program,
14 which, of course, is kind of the plenipotentiary
15 plenary sessions where there's no subcommittee
16 involvement.

17 In addition to making sure the conference is
18 operated, I'm currently the local committee chair as
19 well for the 2025 conference to be held in Dallas. You
20 might want to come. It will be great. So making sure
21 all of the facilities are set up and the conference
22 goes off as planned. And then managing in various ways
23 the meetings of the PCIC of the committee itself and
24 the executive subcommittee and providing leadership and
25 guidanceship -- guidance and leadership -- I apologize

1 -- for the committee as a whole.

2 Q. And so in those roles, are you dealing with
3 technology specific to conveyor systems for aggregates?

4 A. I don't think in -- once I became an
5 executive officer that we've had selected papers in the
6 general program that were directly related to conveying
7 systems. So those are the ones that I have the most
8 familiarity with.

9 Q. Okay. In Paragraph 11 you mention that
10 you've been educated about drilling, fracturing and
11 operations as you consulted and investigated incidences
12 on multiple well drilling, fracturing and completion
13 pad sites over your engineering and consulting
14 engagements. Do you see that?

15 A. Yes, sir.

16 Q. Were any of those incidents that you refer to
17 there incidences that occurred due to a malfunction of
18 a conveying system?

19 A. Yes, one was.

20 Q. You say one was --

21 A. Yes, sir, one was as a failure of a motor
22 caused a fire at a fracturing pad.

23 Q. Okay. What was your role in that
24 investigation?

25 A. Investigating the source of the fire, the

1 ignition source, the fuels which was -- shouldn't have
2 been fuel there but there was and why the motor ignited
3 the fuel.

4 Q. Okay. And when you say there was fuel there
5 that shouldn't have been, could you explain to me what
6 you mean by that?

7 A. Yes, we determined there was a leak of diesel
8 fuel. This was a diesel driven fracturing site and the
9 diesel motors that were driving the blender, there was
10 a leak that supplied fuel in the area of the conveying
11 systems. And then actually the motor was not
12 hazardous, was not a hazardous duty motor or hazardous
13 location motor so it ignited the fuel.

14 Q. Okay.

15 A. So that's as far as the instances are
16 concerned, that's it.

17 Q. Okay. Thank you.

18 A. Consulting or fracturing operations is a
19 different animal, as we talked about earlier.

20 Q. Sure. If you look at your -- your report at
21 Paragraph 12. Do you see that?

22 A. Yes, sir.

23 Q. And did any of the work described in that
24 Paragraph 12 pertain to conveyor systems?

25 A. Yes, sir.

1 Q. All right. Please explain.

2 A. Yeah. At New Dominion, LLC, when I was there
3 for two and a half years or however long that was, I
4 interfaced with the fracturing operations again, in
5 fracturing operations, particularly in that timeframe
6 where the aggregate handling was generally open
7 conveyors, truck delivery and then conveyed over to the
8 blender, fewer silos. There were silos sometimes, but
9 fewer silos back then and so that was my role in
10 interfacing with those fracturing operations.

11 Q. Okay. And what was your role specifically
12 interfacing with the conveyor system?

13 A. Obviously, I observed them and I direct them,
14 I was -- part of my role at New Dominion was
15 engineering part of it was one of the partner's eyes in
16 the field, the geologist partner, keeping track and
17 telling him what's going on in the field. So my roles
18 were varied from company man, the drilling location
19 company man or fracturing location to actually doing my
20 job, which was managing electric infrastructure. But I
21 would interface with the -- as his representative to
22 the fracturing companies and how they handle the
23 aggregate pad size, location, delivering of the
24 aggregate, those kind of things.

25 Q. Okay. And so in connection with those roles,

1 did you actually physically work on any of the conveyor
2 systems that you were observing?

3 A. No, sir.

4 Q. Okay.

5 THE WITNESS: Looks like we've been
6 going about an hour so a break would be good.

7 MR. NYDEGGER: Yeah, we can break now.
8 That's fine.

9 MS. FLANNERY: Okay.

10 THE REPORTER: Going off the record at
11 10:08 a.m.

12 (Realtime technical issues.)

13 THE REPORTER: Back on the record at
14 10:23 a.m.

15 Q. (BY MR. NYDEGGER) Dr. Durham, you understand
16 that you're still under oath, correct?

17 A. Yes, sir.

18 Q. And during the break, did you discuss your
19 testimony in this matter with anyone?

20 A. No.

21 Q. Okay. Thank you.

22 Returning back to your expert report,
23 Dr. Durham, if you look at Paragraph 13, please.

24 A. Yes, sir.

25 Q. And is any of the work described in Paragraph

1 13 directly on conveyor systems for aggregates?

2 MS. FLANNERY: Object to form.

3 A. Not directly. The incident investigation
4 referred to earlier, my recollection is there were no
5 injuries, so OSHA was not involved.

6 Q. (BY MR. NYDEGGER) And -- okay. And so with
7 regard to the injuries and fatalities referenced in
8 Paragraph 13, none of those injuries or fatalities were
9 due to failures or accidents on conveyor systems,
10 correct?

11 A. That's my recollection. Yes, sir.

12 Q. Okay. And then in that paragraph you state,
13 "As principal scientist of THEWAY Labs, part of my
14 responsibilities included overseeing the health,
15 safety, and environmental program at THEWAY Labs and
16 establishing policies and procedures commensurate with
17 OSHA requirements at all locations, including
18 requirement for oil and gas sites."

19 A. Yes, sir. That's correct.

20 Q. And have you worked on any policy specific to
21 conveyor systems?

22 MS. FLANNERY: Object to form.

23 A. I believe we have a -- yes, we have a silica
24 exposure policy specifically related to engineering at
25 fracturing sites, in general. The policy doesn't only

1 apply to that, but it would definitely apply to
2 handling sand and silica, dust exposure at fracturing
3 sites. So that policy would.

4 Q. (BY MR. NYDEGGER) And is that policy just a
5 policy stating how much dust is tolerable at a site
6 or --

7 A. You mean --

8 Q. -- or --

9 A. No, not at all.

10 MS. FLANNERY: Object to form.

11 A. It's the avoidance of exposure to silica
12 dust.

13 Q. (BY MR. NYDEGGER) Okay. And can you explain
14 to me what that policy requires to avoid the exposure
15 to silica dust?

16 A. Generally speaking, and it's been a couple of
17 years since I've updated it. But generally speaking,
18 it's if you're going to be working around the
19 blender -- well, it's not limited, in the areas where
20 they're handling silica sands then you have to wear the
21 proper PPE masks and goggles and things like that to
22 avoid the silica dust exposure.

23 Q. Okay. So the policy's not directed towards
24 the equipment that is used. It's directed towards the
25 activities of the workers themselves, correct?

1 A. Correct. All HSE policies are directed
2 towards the cadence of the workers.

3 Q. Okay. So if you turn to Paragraph 15 of your
4 report.

5 A. Yes, sir.

6 Q. You state that you're an expert in the
7 relevant field of the challenged patent at issue and
8 have been an expert in this field since before the
9 challenged patent was filed. Do you see that?

10 A. Yes, sir.

11 Q. What is the feel of the challenged patent as
12 you understand it?

13 A. Aggregate handling systems.

14 Q. And earlier we talked about the art, do you
15 draw distinction between the field and the relevant
16 art?

17 A. No, sir. I think the field involves the
18 relevant art.

19 Q. Is one a subset of the other?

20 A. Well, it's certainly the relevant art would
21 be a subset in this case -- well, the art that I
22 reference was all written art, so, yes, it's a subset
23 of the field.

24 Q. Okay. So the field of the challenged patent
25 in your view is broader than the relevant art of the

1 patent?

2 A. The art that I used, yes. The art I use was
3 all written. I don't have any system art that I used.
4 So system art would be in the relevant field, but would
5 not be the art for my purposes of my declaration.
6 Could have, just chose not to.

7 Q. Okay. So when you're talking about relevant
8 art right now, is that different from the relevant art
9 that you use in Paragraph 3 where you say, "I have
10 relied upon my knowledge, training, and experience in
11 the relevant art?"

12 A. Well, I -- I -- relevant art would
13 probably -- was broader than the art that I used in my
14 declaration because relevant art could include all of
15 the written or system art that's out there. So I --
16 the relevant field is broader than the art.

17 Q. Okay. And you use the phrase "system art."

18 A. Uh-huh.

19 Q. Explain to me what you mean by "system art."

20 A. "System art" is looking at a functioning
21 piece of equipment or a, not a written publication or
22 patent, but a functional piece of equipment to see what
23 was known about that equipment as of the day of the
24 construction of that system.

25 Q. Okay. At what point did you reach expert

1 status in the field of the challenged patent?

2 MS. FLANNERY: Object to form.

3 A. I haven't made that determination, probably
4 the mid-2000s or so when I had a few years' experience
5 dealing with aggregate handling systems or observing
6 them in the field.

7 Q. (BY MR. NYDEGGER) Okay. So in Paragraph 15
8 still you say, "I'm familiar with how a person of --
9 having ordinary skill in the art would have understood
10 and used the terminology found in the 689 Patent at the
11 time of its filing." Do you see that?

12 A. Yes, sir. Yes, sir.

13 Q. And then you define "a person having ordinary
14 skill as a person with a degree in mechanical
15 electrical petroleum or civil engineering with at least
16 two years' experience working in industry of field that
17 involves handling of particulate materials which may
18 include operations in the oil and gas industries that
19 involve handling of such materials." Do you see that?

20 A. Yes, sir. I believe you read that portion of
21 Paragraph 41 correctly.

22 Q. Of paragraph, which?

23 A. 41.

24 Q. Okay. How did you come up with that
25 definition?

1 A. By looking at the patent, the specification
2 and the file history and the claims of the patent, and
3 determined in my mind who could understand it, who
4 could understand the terminology and the technology
5 used.

6 Q. You go on to state that, "This definition is
7 approximate and more education is substitute for
8 industry experience or vice versa." How much education
9 would be to supplant the two years' of experience?

10 A. I haven't really thought that through as
11 much, probably a couple more years of education than --
12 at least two. It may take a little longer than that,
13 but at least two more years of education to supplant
14 the two years of field experience.

15 Q. Does that education to supplant the field
16 experience need to be more specifically directed other
17 than the engineering degrees you identify?

18 MS. FLANNERY: Object to form.

19 A. I don't understand the question. It's a
20 little vague.

21 Q. (BY MR. NYDEGGER) So let's take -- let's take
22 an electrical engineer.

23 A. Uh-huh.

24 Q. Who gets their undergraduate degree and then
25 gets a few more experiences, a few more years of

1 education in electrical engineering, would they then
2 qualify as a person of ordinary skill in the art?

3 MS. FLANNERY: Object to form.

4 A. It would depend on the classes, but probably
5 not just based on that alone. It would have to be a
6 little more directed towards the understanding the
7 structural loads that would be applicable, things like
8 that. So it would depend on the person and the degree
9 program and what classes they took.

10 Q. (BY MR. NYDEGGER) Okay. And that's what I
11 was sort of driving at. Would there be any specific
12 course work that would, in your view, be required to
13 become a person of ordinary skill in the art just
14 through education without any experience?

15 A. It would have to be course work that would
16 allow you to understand the technology and the terms
17 used in the patent. So things like hydraulic actuators
18 and conveying systems or maybe some dynamics or some
19 more advanced steel classes, things like that would be
20 most applicable. It would really depend on the
21 circumstances and situation.

22 Q. Okay. So then just general education in
23 those disciplines would not be sufficient; is that
24 correct? You'd have to have some specialized
25 curriculum dealing with the particular components and

1 devices used in the conveying systems; is that correct?

2 MS. FLANNERY: Object to form.

3 A. No, I disagree. That wasn't my answer.

4 Because the things I talked about are general
5 engineering courses; statics, dynamics, steel, those
6 are available at any university with engineering
7 programs, generally speaking.

8 Q. (BY MR. NYDEGGER) Okay. How much experience
9 would be required in your opinion to supplant the
10 education recited?

11 A. Probably sufficient experience to be able to
12 do those calculations necessary to ensure the
13 components handle the stresses properly. So maybe
14 experienced to do FEA -- I'm sorry -- finite element
15 analysis, FEA. You would need some of that
16 experience -- enough experience to do the calculations
17 basically and understand the loads.

18 Q. Is that one-year experience, five-years
19 experience, ten-years experience?

20 A. I think it would depend on the person and the
21 circumstances.

22 Q. Well, we're talking about a person of
23 ordinary skill in the art.

24 A. Right.

25 Q. Which is a hypothetical construct, correct?

1 A. Correct.

2 Q. And so we have to have a definition for who
3 that is, correct?

4 A. Correct.

5 Q. And so you state that experience could
6 supplant the education, and I want to know how much
7 experience is necessary to supplant the education under
8 that definition?

9 A. I would say at least four years and
10 sufficient in order to do the -- understand the loads
11 and do the calculations necessary.

12 Q. Okay. So at least four years' of experience?

13 A. I would think so, yeah. I mean, I can't
14 imagine somebody coming out of post-secondary education
15 gaining that understanding of loads and calculations in
16 less than four years. It would be difficult to
17 understand.

18 Q. Okay. Thank you.

19 What is the basis for your familiarity with a
20 person having ordinary skill in the art and
21 understanding how that person would understand and use
22 the terminology found in the 689 Patent at the time of
23 its filing?

24 A. I don't understand the question.

25 Q. Sure.

1 A. If you could rephrase it.

2 Q. You state that you have familiarity with a
3 person having ordinary skill in the art would have
4 understood and used the terminology found in the 689
5 Patent at the time of its filing?

6 A. Yes.

7 Q. And my question is, what is the basis for
8 your familiarity with how a person of ordinary skill in
9 the art would understand and use the terminology found
10 in the 689 Patent?

11 A. My education, training and experience.

12 Q. Have you worked with individuals who are
13 persons of ordinary skill in the art?

14 A. Certainly.

15 Q. And what capacity?

16 A. Over a 30-year career I've worked with
17 several people that would be able to understand that
18 have experience with and familiarity with aggregate
19 handling system, particularly those with conveyors and
20 would be able to do the calculations necessary and
21 understand the terminology necessary to understand the
22 689 Patent. There's not a lot in the 689 Patent that's
23 very complex. It's pretty basic stuff.

24 Q. Okay. Have you supervised persons who would
25 be -- who would qualify as persons of ordinary skill in

1 689 Patent in any projects that involved designing,
2 maintaining or testing conveyor systems?

3 A. It's likely. It's likely, particularly when
4 I was with EDG as vice president of project management
5 engineering.

6 Q. Describe for me the project that you
7 supervised and the persons of ordinary skill in the art
8 and your interactions with them.

9 A. Well, I was in a position we were
10 constructing power plants, design EPC engineering
11 procurement in construction for power plants and I
12 designed mechanical -- I'm sorry -- supervised
13 mechanical engineers, structural engineers, electrical
14 engineers, draftsman, designers. That is very likely
15 some of those folks would qualify as a person of
16 ordinary skill.

17 Q. You say it's very likely. That suggests to
18 me that you don't know if they were or not persons of
19 ordinary skill in the art of the 689 Patent.

20 A. I think that's fair. Yeah, I wouldn't know
21 all of their experience and all of their background and
22 education, certainly.

23 Q. Any other -- any other experience with such
24 individuals?

25 A. Other than supervising them, I mean, I work

1 with engineers all the time and probably hundreds of
2 engineers I worked with over the past 30 years would
3 qualify to be able to understand in how a person of
4 ordinary skill would understand the terms and
5 technology in the 689 Patent.

6 Q. And so at what point were any of those
7 engineers that you just referenced, those hundreds of
8 engineers, persons of more than ordinary skill, for
9 example, would be considered an expert in the field?

10 A. It's very likely, again. In a long career,
11 you're going to face an awful lot of people.

12 Q. And I understand you interface with an awful
13 lot of people, but my question is more working directly
14 with them as a supervisor or as a team member on a
15 project. If we limit it to that kind of interaction,
16 does that help narrow it for you?

17 A. No, sir.

18 Q. Okay. In Paragraph 44 of your report you
19 reference presumed points of novelty. Do you see that?

20 A. Yes, sir.

21 Q. And you state those --

22 A. You say 44? No, sir. I don't see that in
23 44.

24 Q. I may have a typo. How about Paragraph 33?

25 A. No, sir. I don't see that in 33 either. No,

1 sir.

2 Q. Paragraph 43.

3 A. Yes, sir. 43.

4 Q. Okay. So Paragraph 43 identifies presume
5 points of knowledge. Do you see that?

6 A. Yes, sir.

7 Q. All right. And then in Paragraph 44 you
8 state, "Those features, however, were well-known at the
9 time of the 689 Patent was filed, along with all the
10 other features of the challenged claims. Every feature
11 of the challenge claims is disclosed in the prior art."
12 Do you see that?

13 A. Yes, sir.

14 Q. Is it your opinion that the disclosure of the
15 points of novelty in the prior art is sufficient to
16 render what the claim is about?

17 A. No, sir.

18 Q. What's required then, in your opinion?

19 A. In my understanding, it also requires some
20 rationale for if -- it could be. It could be, if it's
21 disclosed in a single reference, that would be
22 sufficient.

23 Q. Okay.

24 A. But if it's disclosed in multiple references,
25 there has to be some rationale or reason for combining

1 the teachings of those references that would have
2 occurred to a person of ordinary skill at the time of
3 the patent.

4 Q. Okay. And is that limited to the points of
5 novelty in which you identify?

6 A. No, sir.

7 Q. What's encompassed there?

8 A. It's all the invention as a whole, the claim
9 as a whole.

10 Q. Okay. In Paragraph 45 you state that, "It's
11 your opinion that the grounds then validity considered
12 in your report are not cumulative of the prior art
13 considered by the examiner during the examination." Do
14 you see that?

15 A. Yes, sir.

16 Q. And then in Paragraph 47 you state that, "You
17 relied on several additional references that are used
18 in combination with the primary reference. Most of
19 these references were not considered during the
20 prosecution of the 689 Patent and are not cited on the
21 cover of the 689 Patent." Do you see that?

22 A. Yes, sir.

23 Q. In your opinion, can a prior art reference be
24 cumulative of the art during the prosecution without
25 being listed on the cover of the 689 Patent?

1 MS. FLANNERY: Object to form.

2 A. It could be.

3 Q. (BY MR. NYDEGGER) How?

4 A. I -- I essentially had the same subject
5 matter as a reference that was considered by the
6 examiner.

7 Q. Did you compare the content of each of the
8 secondary references you rely on in your opinion with
9 the content of the references cited on the cover of the
10 689 Patent to determine whether they were cumulative?

11 A. I did not look at every reference cited on
12 the cover. I looked at those references that were
13 considered substantively by the examiner and noted it
14 in the -- any of his communications, and I looked at
15 several of the other references as well.

16 One, in particular, I did not see, for
17 example, DYNETEK or anything like DYNETEK in any of the
18 references I looked at.

19 Q. Okay.

20 A. So --

21 Q. And -- so I believe you mentioned that you
22 have not looked at all the references cited on the
23 cover of the 689 Patent, correct?

24 A. Correct, I didn't pull up every single one.

25 Q. And so it could be that even the DYNETEK

1 reference is similar to one of the references cited on
2 the cover of the 689 Patent, you can't be certain
3 because you didn't look at them, correct?

4 A. Correct.

5 MS. FLANNERY: Object to form.

6 A. It's possible that it could be. I looked at
7 those asterisks at least -- had an asterisk beside
8 them. I don't know what the verb form of that would
9 be. Had an asterisk beside them that were the ones
10 that considered substantively by the examiner, at
11 least, and didn't see anything like it.

12 Q. (BY MR. NYDEGGER) Okay. So, in your opinion,
13 does the conveyor system disclosed in DYNETEK load
14 aggregate material through a system of conveyors to an
15 elevated location?

16 A. Yes, sir.

17 Q. And is that the understanding of DYNETEK you
18 applied when rendering your opinions based on the
19 DYNETEK reference?

20 A. Yes, sir. DYNETEK shows conveyors at an
21 elevated location and delivering those -- delivering
22 materials by those conveyors to other elevated
23 locations such as the top of a tank or a rail car,
24 truck, et cetera.

25 Q. The statement in your report says that it

1 loads aggregate materials through a system of conveyors
2 to an elevated location.

3 A. Yes, sir.

4 Q. And so does the, in your opinion, does the
5 DYNETEK conveyor elevate the location of aggregate
6 materials?

7 MS. FLANNERY: Object to form.

8 A. Not the pieces I picked up from it, no, it
9 does not elevate. The materials have to be elevated
10 somehow because DYNETEK itself shows those conveyors
11 operating in the elevated location and delivering to an
12 elevated location, but pieces I picked up don't --
13 don't elevate.

14 Q. (BY MR. NYDEGGER) Okay. Does DYNETEK explain
15 how the aggregate gets to an elevated location?

16 A. No, sir.

17 Q. So is it correct that DYNETEK -- DYNETEK does
18 not teach a system for elevating aggregate materials?

19 A. That's fair, yeah.

20 Q. Are you aware that Solaris commissioned
21 Anchor Technical who then hired Masaba to design and
22 manufacture new transportable system for conveying
23 aggregates for storage in wealth --

24 A. No.

25 MS. FLANNERY: Object to form.

1 Q. (BY MR. NYDEGGER) -- in silos at well sites?

2 MS. FLANNERY: Sorry, object to form.

3 A. No, sir.

4 Q. (BY MR. NYDEGGER) Do you think that that
5 would be important to know when rendering an opinion
6 about the validity of the 689 Patent?

7 MS. FLANNERY: Object to form.

8 A. No, sir.

9 Q. (BY MR. NYDEGGER) So you haven't discussed
10 with Solaris about why it commissioned a design of a
11 new transportable system for creating aggregate; is
12 that correct?

13 MS. FLANNERY: Object to form.

14 A. That's correct.

15 Q. (BY MR. NYDEGGER) And you haven't talked to
16 Solaris about whether the conveyor system that Masaba
17 designed, which is the subject matter of the 689 Patent
18 met its needs; is that correct?

19 MS. FLANNERY: Object to form.

20 A. That's correct.

21 Q. (BY MR. NYDEGGER) And you also haven't talked
22 to Solaris about whether that design has been
23 commercially successful for Solaris; is that correct?

24 MS. FLANNERY: Object to form.

25 A. That's correct.

1 Q. (BY MR. NYDEGGER) Do you think that the
2 reasons underlying why Solaris commissioned the design
3 of a new transportable system for conveying aggregate
4 for storage in silos at well sites would be -- should
5 be considered when determining whether the claims of
6 the 689 Patent covering that conveyor system are
7 invalid as obvious?

8 MS. FLANNERY: Object to form.

9 A. No, sir.

10 Q. (BY MR. NYDEGGER) Do you think that knowing
11 whether the conveyor system Masaba designed was covered
12 by the 689 Patent met Solaris' needs should be
13 considered when determining whether the claims of the
14 689 Patent covering that design are invalid as obvious?

15 MS. FLANNERY: Object to form.

16 A. No, sir.

17 Q. (BY MR. NYDEGGER) Do you think that the --

18 A. At least I haven't seen evidence to that
19 affect. If I see evidence to that affect, I can
20 consider that as part of a secondary indicia of not
21 obviousness, but I haven't seen any such evidence.

22 Q. Well, my question --

23 A. It may or may not have bearing in it.

24 Q. My question is, do you think it would be
25 important to know and consider in determining whether

1 the claims are obvious or not?

2 MS. FLANNERY: Object to form.

3 A. No, sir.

4 Q. (BY MR. NYDEGGER) Okay. Do you think that
5 the commercial success of the conveyor system Masaba
6 designed is covered by the 689 Patent is important to
7 know in determining whether the claims are invalid as
8 obvious?

9 MS. FLANNERY: Object to form.

10 A. It may be, depending on the circumstances.

11 Q. (BY MR. NYDEGGER) And what circumstances
12 would it be important to know and in what circumstances
13 would it not?

14 A. If there's evidence of a nexus between such a
15 product and is commercial success and how it ties in
16 with the patent, then it may be important.

17 Q. Okay. Are you aware that there's a district
18 court litigation pending between Masaba and Solaris?

19 A. Yes, sir. I saw that.

20 Q. And are you aware that Masaba has accused
21 Solaris of fringing the 689 Patent?

22 A. That's generally what I understand.

23 Q. And did you do anything to determine the
24 nature of that lawsuit or...

25 A. No, sir.

1 Q. Any of the background for why it was filed?

2 A. No, sir.

3 Q. Did you think that any of that would be
4 relevant to the validity of the claims of the 689
5 Patent?

6 A. No, sir. Not directly.

7 Q. At the time of the invention of the 689
8 Patent, to your knowledge, what were the functional
9 requirements for systems to move aggregate and destroy
10 systems that oil and gas --

11 A. I'm sorry. I missed the middle of that
12 question.

13 Q. Sure. So at the time of the invention of the
14 689 Patent, what functions were needed to be met by
15 systems to move aggregate into storage systems that oil
16 and gas --

17 A. Systems to? Systems to, there's a word there
18 I'm missing. I heard systems to aggregate, and that
19 doesn't make any sense.

20 Q. Systems to move aggregate.

21 A. To move aggregate. What requirements systems
22 to move aggregate? Generally speaking to, in those
23 locations they use refillable silos would be to elevate
24 the aggregate to the top of the silo and deliver it
25 into the silo, and also controlling dust exposure or

1 silica dust exposure to workers from that elevation and
2 moving process. Those would be the requirements.

3 Q. Okay. So if I understood correctly, you
4 identified a requirement to elevate the aggregate to
5 the top of the storage silo; is that correct?

6 A. Yes, for those locations that use refillable
7 storage silos, yes.

8 Q. Okay. And then you also mentioned a
9 requirement concerning dust control; is that correct?

10 A. Yes, sir. Maybe requirement's a strong word,
11 but there's certainly industry guidance and industry
12 experience controlling dust silica exposure to the
13 workers. There's no regulation that I'm aware of other
14 than general duty of the OSHA regulations. But it was
15 certainly something that the industry was concerned
16 with.

17 Q. Okay. Was there a need for the systems to be
18 transportable?

19 A. For aggregate site, yes, sir. That's a good
20 point. Yes, sir.

21 Q. Was there a need to minimize the footprint of
22 the conveyor system?

23 A. In some locations that's likely a
24 requirement, other locations, not so much.

25 Q. Was there a need for the system to be able to

1 receive aggregate material from a variety of different
2 types of trucks?

3 MS. FLANNERY: Object to form.

4 A. In some locations, that's probably true.

5 Q. (BY MR. NYDEGGER) Was there a need for the
6 systems to be able to convey the material at certain
7 rates?

8 MS. FLANNERY: Object to form.

9 A. At a rate sufficient to keep the silos full,
10 yes, sir.

11 Q. (BY MR. NYDEGGER) Okay.

12 A. We can go on and on with a list of
13 requirements, but those are some pretty important ones.

14 Q. Okay. And those requirements that we just
15 discussed, how long have those needs been present in
16 the industry?

17 MS. FLANNERY: Object to form.

18 A. For all but controlling silica dust, probably
19 since the 1940's.

20 Q. (BY MR. NYDEGGER) Okay. And then --

21 A. At least some of those requirements it's
22 basic considerations weren't a big concern in that era,
23 but at least most of them would be.

24 Q. When did special considerations become more
25 important?

1 A. It's when you started moving out of, either
2 out of very rural locations like the Permian into, for
3 example, there's quite a few shale fields that are more
4 urban. In fact, there's facilities on Dallas/Fort
5 Worth Airport. I actually worked on some of those back
6 in the day.

7 And when you're fracturing those, you would
8 obviously be concerned with space. There's some
9 regulations and some jurisdictions like Colorado, for
10 example, that limit the size of the pad that you can
11 have. You actually have to construct walls around it
12 for sound containment, those kind of things.

13 So it's kind of been a gradual thing over
14 time. As landowners become more knowledgeable, they're
15 more interested in controlling the size of the pad. So
16 it's just kind of been, it's been more gradual. Some
17 places regulations, some places just the tendency, some
18 places still not that much of a concern.

19 Q. So back to my question, earlier you
20 mentioned, you know, the other requirements since about
21 the 1940's, so fairly long time, the space requirements
22 began to come into play. Could you give me sort of a
23 timeframe of when that sort -- when the time space
24 requirements started to become more important in the
25 industry?

1 MS. FLANNERY: Object to form.

2 A. Again, depending on the location in those
3 areas where you're moving into urban locations, where
4 there's regulations that control it or where you have
5 more sophisticated landowners that limited the size of
6 the pad.

7 So it would -- the time on any particular pad
8 location may vary from maybe, who knows when. It's
9 just whenever those requirements became -- not to be,
10 to answer the question with a question, but it's when
11 those requirements became important in that particular
12 location.

13 Q. (BY MR. NYDEGGER) And just -- do you have a
14 sense for when that -- or the size location started to
15 become important in -- in any area?

16 A. Not really. Probably before my time in some
17 locations.

18 Q. Okay.

19 A. Well, for example, King Ranch was pretty
20 sophisticated landowner that would have been in the
21 '60s probably.

22 Q. Okay. And then you also separated out the
23 requirement for silica dust control, correct?

24 A. Yeah.

25 Q. And when did silica dust control start to

1 become an important consideration for these systems?

2 A. At least by the early to mid-2010s, when it
3 became kind of more known in the industry and there
4 were some OSHA guidance, if you will, that came out.
5 Not that it wasn't important before, but it wasn't a
6 very big concern most of the time, not in my
7 experience.

8 Q. Okay. So then around the 2010's timeframe,
9 additional guidance started coming out from OSHA that
10 started to increase the importance of that
11 consideration; Is that accurate?

12 A. Well, that was part of the -- it was the
13 guidance and just general understanding of the risks,
14 you know, industries typically become more safer the
15 longer they exist. Maybe oil and gas a little slower
16 than some, but typically that's the case. We learn of
17 new hazards.

18 Q. Okay. Thank you.

19 What, in your opinion, would a POSITA
20 understand the term "conveyor for moving aggregate" to
21 mean in the context of the 689 Patent?

22 A. Would understand that to be some kind of
23 mechanical system that would transport the aggregate
24 from one location to another.

25 Q. Okay.

1 A. It may or may not have -- generally, I would
2 say it has some mechanical component. Yeah, I would
3 say it would have some mechanical component to help in
4 that drive.

5 Q. Can you explain to me more about what you
6 mean by a mechanical component?

7 A. It's something that would -- some type of --
8 I hate to use the word machine because that's actually
9 pretty broad -- but some kind of operable component
10 that would help deliver, position something or help
11 drive the aggregate would, most POSITAs would
12 understand have to have some kind of component like
13 that to be a conveyor as opposed to just, for example,
14 a tube, which that's a fixed tube would not necessarily
15 be a conveyor, at least wouldn't immediately come to
16 mind.

17 Q. Okay. Well, we're talking about the
18 understanding of a --

19 A. Correct.

20 Q. -- of a person of ordinary skill in the
21 art --

22 A. Exactly.

23 Q. -- in the context of the 689 Patent. And so
24 when you say -- you talked about devices that in some
25 manner or another in part movement to the particles?

1 A. Correct. Some mechanical device that -- as
2 portion of that conveyor, some mechanical device that
3 helps in that movement.

4 Q. Okay. And you compared that or you
5 contrasted that with, I believe you said a tube,
6 correct?

7 A. A fixed tube.

8 Q. Right.

9 A. Just a pipeline --

10 Q. Okay.

11 A. -- would not be considered. I don't think
12 that would come to mind to a POSITA when they see the
13 word conveyor from -- the actual term, whatever,
14 conveyor for moving aggregate --

15 Q. Okay.

16 A. -- would not think of a pipeline --

17 Q. Okay.

18 A. -- or you could move aggregate in pipeline
19 depending on the aggregate.

20 Q. Okay. So what, in your opinion, would a
21 POSITA -- sorry -- a person of ordinary skill in the
22 art -- do you understand if I use POSITA?

23 A. Yes, sir.

24 Q. Okay. I believe you also use that
25 abbreviation in your report to --

1 A. Yes, sir.

2 Q. -- refer to a person of ordinary skill in the
3 art. And when we're talking about a person of ordinary
4 skill in the art, do you understand that during this
5 deposition it's always in reference to the 689 Patent?

6 A. Yes, sir.

7 Q. Okay.

8 A. And just, it's probably not important, but
9 you keep calling it a report. It's actually a
10 declaration and so just so we have that clear in the
11 record. That when you say report, I'm understanding
12 that to mean my declaration.

13 Q. Thank you. I appreciate that and I
14 appreciate the clarification on the record.

15 So, what, in your opinion, would a POSITA
16 understand the term conveyor extension assembly to mean
17 in the context of the 689 Patent?

18 A. For example, in terms of Claim 1 as a -- as a
19 exemplary. Claim 1, go ahead and defines what a
20 conveyor extension assembly would be. So I call that
21 Limitation 1H. And then down through the end of the
22 claim, Limitation 1K, those -- that definition is
23 defined in the claim. So that's how a POSITA would
24 understand conveyor extension assembly.

25 Q. Okay. So would a POSITA understand that a

1 conveyor extension assembly includes a conveyor for
2 moving aggregate?

3 A. An extension conveyor for moving aggregate,
4 yes, sir.

5 Q. Okay. In your opinion, is cement an
6 aggregate?

7 A. Yes, sir. Dry cement certainly is.

8 Q. So, in your opinion, are powders aggregates?

9 A. Powders can be aggregates, yes, if they have
10 varying particle size.

11 Q. So I believe you testified that powders can
12 be aggregates if they have --

13 A. Varying particle size.

14 Q. -- varying particle size?

15 A. Yes. Yes, sir. The understanding, the
16 general scientific definition of aggregate is a -- is a
17 material that has varying -- a drier material. I don't
18 know exact term, but material that has varying particle
19 sizes. It's not a fine, or, if you will, constant
20 particle size.

21 Q. Okay. So if a powder has varying particle
22 sizes, it's an aggregate. But if a powder has uniform
23 particle sizes, it's not an aggregate; is that correct?

24 A. Yes, sir.

25 MS. FLANNERY: Object to form.

1 A. That's -- that's correct. It's not
2 aggregated from varying particle sizes, but the concept
3 of an aggregate is something that's aggregated together
4 of varying particle sizes. So a talcum, for example,
5 which is a constant uniform particle size, is a powder,
6 not necessarily an aggregate.

7 Q. (BY MR. NYDEGGER) Okay. And it's your
8 opinion that that's how a POSITA would understand
9 aggregate in the context of the 689 Patent?

10 A. Yes, sir. Certainly in the context of the
11 689 Patent since it's largely directed towards a
12 proppant, which is always varying particle size, or at
13 least, I've always seen it as varying particle size.

14 Q. Okay. And, in your opinion, is concrete an
15 aggregate?

16 A. Yes, sir. When it's dry, it's definitely an
17 aggregate.

18 Q. Okay. And when it's wet?

19 A. When it's wet, it's a slurry.

20 Q. Okay. So is it correct then that a POSITA
21 would not understand wet cement to be an aggregate in
22 the context of the 689 Patent?

23 A. Yeah, we wouldn't necessarily call that an
24 aggregate. We call it a slurry, which a slurry is an
25 aggregate suspended in a liquid, generally speaking.

1 Q. Okay. So if you turn to Paragraph 113 of the
2 declaration.

3 A. Okay. I reviewed that briefly.

4 Q. Okay. In there you indicate that "Waldner
5 teaches its system or related technologies not only for
6 handling proppant at hydraulic fracturing site, but
7 also to fill grain bins in the agricultural industry as
8 well as concrete/bulk cement systems." Did you see
9 that?

10 A. Yes, sir.

11 Q. And I'm going to hand you a copy of Waldner.
12 This is previously marked as Exhibit 1004.

13 (Exhibit No. 1004 marked.)

14 MR. NYDEGGER: Do you have a copy,
15 Liz?

16 MS. FLANNERY: I think I do. Yeah,
17 yeah. If you need that, that's okay.

18 MR. NYDEGGER: Okay. I'm sorry, for
19 some reason I only have two copies of this one.

20 MS. FLANNERY: It's okay. You can
21 keep going. I'll work with mine.

22 MR. NYDEGGER: Okay. I apologize.

23 MS. FLANNERY: It's okay.

24 Q. (BY MR. NYDEGGER) Dr. Durham, can you
25 identify for me where in Waldner it teaches that the

1 Waldner system is used for cement or concrete?

2 A. I don't think I said that in my report -- or
3 my declaration -- now you got me doing it.

4 Q. Okay.

5 A. I don't think I said that in my declaration.

6 Q. Okay.

7 A. Well, it's not in this paragraph.

8 Q. Okay. That's what I understood your
9 paragraph to mean, so help clarify what you meant by
10 that.

11 A. Well, both references discuss handling not
12 only sand, but other type of aggregate materials,
13 including concrete bulk cement systems. So that's not
14 the same as using Waldner to deliver in a concrete bulk
15 cement system. But it's saying Waldner learned from
16 systems that handle concrete, mobile concrete batching
17 systems.

18 Q. Okay.

19 A. So the related technology. The point of the
20 paragraph is that those are related technologies for
21 both -- both in DYNETEK and in Waldner.

22 Q. Okay. Thank you. I appreciate that
23 clarification.

24 So if you look at Paragraph 115 of your
25 report. Let me know when you're there.

1 A. Okay.

2 Q. In that paragraph you state that, "Waldner's
3 mechanism for adjusting the discharge chute's position
4 may be limited in its precision range of motion." Do
5 you see that?

6 A. Yes, sir.

7 Q. What is the limit of Waldner's precision in
8 adjusting the chute's position?

9 A. What I'm trying to convey there is because
10 it's using gravity and you're using gravity to control
11 rate, then that puts a limit on how you can orient
12 the -- the discharge chute. You're limited to a
13 certain, at least a certain range of angles to get the
14 rate you require, and you have to combine that with the
15 horizontal movement to get somewhere in the
16 neighborhood of the -- or somewhere above the silo.
17 So that -- that limits the precision you control either
18 rate or position because they're interrelated in
19 position.

20 Q. So you're referring to the fact that the
21 chute of Waldner has to be angled as applying a
22 limitation on its orientation; is that correct?

23 A. Correct. Yeah. Yes, sir. If you're
24 reaching out further, then you're limited in the rate
25 you can deliver the material. If you're more vertical,

1 you're limited in -- well, that's the biggest
2 limitation when you're out more vertical. Having to go
3 further, the angle has to be flatter to get that
4 distance, get your orientation correct and that's going
5 to limit the amount -- the rate that you can deliver at
6 or at least how you can control that rate. And it's
7 true when it's closer too. It's going to change the
8 rate. And so the rating position are interconnected
9 and that limits your -- limits something. Limits one
10 of the two.

11 Q. Okay.

12 A. If I want a certain rate, that limits how --
13 where I can put it. If I want a certain location, that
14 limits the rates.

15 Q. Okay. So you're not stating necessarily that
16 the range is -- is mechanically limited necessarily,
17 but it's more limited as to -- it's more limited by the
18 delivery rate.

19 A. Well, in Waldner, that range of rotation is
20 also mechanically limited the way it's designed. It's
21 limited somewhere around 180 degrees. Whereas, DYNETEK
22 adds nearly 360. I think they say 330, 330 degrees.
23 So, yes, you are mechanically limited also in your
24 range of motion in DYNETEK -- I'm sorry -- in Waldner.

25 Q. Okay. And what in Waldner gives rise to your

1 opinion that it's -- that the range is limited to 180
2 degrees?

3 A. Some -- to be clear, somewhere in the
4 neighborhood of 180 degrees, maybe a little less, maybe
5 a little more. And it's the position, for example, the
6 teachings -- well, in that Figure 22A right there in
7 that same page, 95, where that pen is located relative
8 to the frame of Waldner, as you swing, you're going to
9 have to stop somewhere in the neighborhood of 180
10 degrees. Maybe you can go 190, maybe you can go only
11 160, but you're limited by the position of that frame
12 would stop the chute from rotating since you don't have
13 that second articulated point.

14 Q. Okay. Are you aware of any teaching that --
15 that approximate 180-range limitation of Waldner was
16 insufficient in any way?

17 MS. FLANNERY: Object to form.

18 A. I didn't look for that, so, no, I don't have
19 anything at my fingertips. To a POSITA, any increase
20 in range of motion is beneficial.

21 Q. (BY MR. NYDEGGER) Okay. Let's explore that.
22 So increasing the range from, say, 50 feet to 5,000
23 feet would be beneficial?

24 A. I think that's taking it to an extreme.
25 We're talking about range of motion I thought, so it

1 increased from 180 to 330 would be beneficial --

2 Q. Okay.

3 A. -- certainly. Since we're talking about
4 range of motion.

5 Q. Okay.

6 A. But, yes, an increase of reach would be
7 beneficial to the limits of the mechanical strength of
8 the materials and the design.

9 Q. At some point wouldn't -- wouldn't it
10 increase in range or reach just be added expense that
11 doesn't have any utility?

12 A. In reach, yes, certainly and range of motion.
13 I mean, it doesn't make any sense to have it on top of
14 itself, right? You can't deliver aggregate based on
15 back on top of the rest of the assembly of Waldner, so
16 that wouldn't be beneficial -- well, it could be. No,
17 that still could be beneficial. Yes, that still could
18 be beneficial because you can change from, for example,
19 one at a 4:00 o'clock position to one at a 7:00 o'clock
20 position without having to go through an entire range.
21 So range of motion, no, I don't see any place that
22 becomes less beneficial. At reach, yeah, eventually.

23 Q. Okay. So in Paragraph 115 you talk about
24 limits to the precision. Do you see that?

25 A. Yes, sir.

1 Q. And we've been discussing limits to the range
2 of motion and we talked about limits that are -- that
3 the limits, the interplay between the position of the
4 chute and the delivery rate, can you explain to me what
5 is the limit in precision of moving Waldner chute?

6 A. Well, it's exactly that. It's the interface
7 between rate and position, because they -- one affects
8 the other, if you have one that's fixed, I need a
9 certain rate that limits the -- where I can put it. So
10 that limits the position of where you can put it. If I
11 have a requirement to put it someplace, that limits the
12 precision of what range -- what rates I can deliver.

13 Q. Well, I understand the interplay between
14 position and rate. What I don't understand is the
15 limit in precision.

16 As I understand, and you could place Waldner,
17 the chute, the discharge end of Waldner, anywhere
18 within its range precisely. Now, that may affect your
19 delivery rate, but that doesn't mean the position is
20 not precise.

21 MS. FLANNERY: Object to form.

22 A. Yes. Well, I'm not limiting precision to
23 precision of the location. It also applies to the
24 precision of the rate. Because of the interplay, if I
25 have a particularly delivery location, I may not be

1 able to deliver precisely what I want to deliver as far
2 as a rate goes.

3 Q. (BY MR. NYDEGGER) So if I understand
4 correctly, if you fix the rate, that may limit the
5 precision. Is that what you're stating?

6 A. That may limit the precision of the position.
7 If I fix my rate, that limits -- I may not be able to
8 position it exactly precisely where I want to. If I
9 limit -- if I fix my position, then that what limits
10 the precision of the rate I can deliver. I can -- may
11 not be able to deliver precisely what I want. Whereas,
12 incorporating system such as DYNETEK solves both of
13 those problems.

14 Q. Okay. So focusing on Waldner for the time
15 being, if we divorce concerns about position and rate,
16 at that point, is there any teaching in Waldner that
17 you can't position the discharge and with precision?

18 MS. FLANNERY: Object to form.

19 A. You can't divorce one from the other. And I
20 haven't spent any time working on that. I don't recall
21 anything from Waldner about that, but because you can't
22 divorce them. They're interrelated so --

23 Q. Perhaps --

24 A. -- I don't know. It's not a hypothetical
25 I've explored.

1 Q. Okay. So let me -- divorce is perhaps not
2 the right word. If we are not concerned about the rate
3 of delivery, is there any teaching in Waldner that
4 limits how precisely you can place the discharge end of
5 the chute within its range of motion?

6 MS. FLANNERY: Object to form.

7 A. Again, that's a hypothetical I have not
8 explored because you are concerned with rate of
9 delivery.

10 Q. (BY MR. NYDEGGER) Well, I'm -- you're an
11 expert, so I'm entitled to pose hypotheticals --

12 A. Yeah, it's just not one --

13 Q. -- so given a hypothetical.

14 A. It's not one I've explored. So I think I
15 would want to spend some time with that one.

16 Q. Well, go ahead.

17 A. Well, okay.

18 Can I ask for a pen from counsel?

19 MS. FLANNERY: Sure.

20 Q. (BY MR. NYDEGGER) So, Dr. Durham, you've had
21 time to review patent in connection with a hypothetical
22 of what -- whether Waldner teaches limits in the
23 precision of the location of the end of the discharge
24 chute if we don't place limits due to the discharge
25 rate. Have you been able to come up with an answer to

1 that hypothetical?

2 MS. FLANNERY: Object to form.

3 A. Well, in that short period of time, I did
4 find some teachings, for example, in Fig 22A, as we
5 see, the discharge chute is extended laterally away
6 from the elevating assembly and controlled by a single
7 actuator in Waldner. And that actuator located closer
8 -- under the distal end of the discharge chute and not
9 at the proximal end of the discharge chute. And a
10 POSITA with experience and seeing and at least
11 understanding these type systems would understand that
12 that swing mechanism with no framework to guide it,
13 having that big cantilever out away from the actuator
14 would limit precision.

15 In other words, it would be very difficult to
16 swing it precisely where you want because you're
17 controlling a long member with a short member. So that
18 makes it challenging to position exactly where you want
19 it. Anybody that's been around mechanical systems of
20 this type would understand that and a POSITA would.

21 Q. Okay.

22 A. So that teaching is there as well.

23 Q. Is DYNETEK also controlled in the similar
24 manner where the control is on the proximal end and not
25 the distal end of the discharge?

1 MS. FLANNERY: Object to form.

2 A. No. DYNETEK has a different function. The
3 control of the first section of DYNETEK is at the
4 proximal end. But then you have a second articulated
5 point control closer to the distal end. So you're kind
6 of a medial location closer to the distal end, and that
7 would improve the precision because you have two
8 actuators, if you will. One located closer to the
9 distal end, then that would make it easier to control
10 position certainly.

11 Q. (BY MR. NYDEGGER) Okay. Is there any
12 teaching in Waldner that its precision was -- made it
13 insufficient or inadequate to perform its intended use?

14 MS. FLANNERY: Object to form.

15 A. I'm not -- I don't think there is in Waldner,
16 no, not teaching like that.

17 Q. (BY MR. NYDEGGER) Are you aware of any -- are
18 you aware of any teaching or information anywhere that
19 Waldner's precision was insufficient for its intended
20 use?

21 MS. FLANNERY: Object to form.

22 A. Not that I can come up with on the top of my
23 head, no. I mean, there's a lot of information
24 I haven't seen that's possible that's out there, but
25 nothing in Waldner certainly.

1 Q. (BY MR. NYDEGGER) And talking about Waldner's
2 range of motion, is there any teaching or information
3 that you're aware of, that the range of motion of
4 Waldner was inadequate for any intended use?

5 MS. FLANNERY: Object to form.

6 A. Not in Waldner. No, sir. I don't think I've
7 ever seen that in a patent.

8 Q. (BY MR. NYDEGGER:) Well, my question wasn't
9 limited to Waldner. Are you aware of any other
10 information outside of Waldner that would indicate that
11 Waldner would be -- Waldner's range of motion would be
12 inadequate?

13 MS. FLANNERY: Object to form.

14 A. I think the knowledge of a POSITA would go to
15 that, and a POSITA would understand the benefits of
16 increasing the range of motion to reach additional
17 silos from a single location. As far as specific
18 teaching, I think DYNETEK provides that teaching.
19 DYNETEK, in its design, provides, for example, increase
20 range of motions. And from DYNETEK, a person of
21 ordinary skill would immediately recognize those
22 benefits of more precise and control and increased
23 range of motion.

24 Q. (BY MR. NYDEGGER) Okay. Is the discharge
25 chute of Waldner movable to fill multiple silos from a

1 single location?

2 A. Yes, sir.

3 Q. Is there a difference in the discharge rates
4 between the Waldner and DYNETEK systems?

5 A. There would be.

6 Q. How do you know that?

7 A. By the mechanics of the system because
8 Waldner's controlled only by gravity. In certain
9 positions, it would have only certain discharge rates,
10 and DYNETEK, you control the rate regardless of its
11 position, so there would be differences.

12 Q. Do you know what the discharge rate of
13 Waldner is?

14 A. It would depend, again, on the density of the
15 material and the gravity and the friction coefficient
16 of the chute, probably one or two other things as well.
17 But, no, I don't have a precise number on that. That's
18 not in Waldner. The point is, the control. You can
19 control the rate differently and DYNETEK teaches that.

20 Q. So if you look at Paragraph 116 of your
21 declaration. In that paragraph you state, "The POSITA
22 would recognize that the combination of nearly 330
23 degrees of rotation and vertical discharge from 3 to 60
24 feet means discharged to various positions in 3D space
25 similar to Waldner." Do you see that?

1 A. Yes, sir.

2 Q. How does DYNETEK achieve vertical discharge
3 of 3 to 60 feet?

4 A. By changing the length and the orientation --
5 both the length and the orientation of the conveyors,
6 mostly orientation.

7 Q. So what change in the orientation of DYNETEK
8 changes the vertical discharge?

9 A. The position of the discharge spout.

10 Q. So I'm handing you what's been previously
11 marked as Exhibit 1005. This is the DYNETEK reference.

12 (Exhibit No. 1005 marked.)

13 MS. FLANNERY: I've got it, actually.

14 Q. (BY MR. NYDEGGER) And when you're talking
15 about the discharge spout, can you direct me to what
16 you're talking about in the DYNETEK reference?

17 A. If you have 1014, I believe that would also
18 be beneficial. But in here, Page 2 of Exhibit 1005,
19 the load out, "retractable loading spouts of 3 to 60
20 feet of vertical travel and dust recovery." And then
21 on that same page we can see that retractable loading
22 spout in the figure in the lower left-hand corner of
23 that page. And I believe Exhibit 1014 provides maybe
24 some additional details as well.

25 Q. So the loading spout?

1 A. Uh-huh.

2 Q. That's what you're referring to there,
3 correct?

4 A. Correct. That's the piece that controls
5 vertical discharge point is the loading spout.

6 Q. Okay. Is the loading spout a conveyor?

7 A. Is the loading spout a conveyor? No, sir.

8 Q. Okay.

9 A. I don't see -- well, not -- it does have a
10 mechanical component for positioning that. So in some
11 circumstances, it could be, yes, but I don't know.
12 That's an interesting question. I think it would meet
13 the general definition of a conveyor, which is an
14 apparatus having a mechanical piece to help move
15 material because it has the -- because it's retractable
16 and moveable. There you go. I think that's the best
17 answer I could give in such a limited time.

18 Q. So you're saying that the discharge spout is
19 different than just an open tube?

20 A. Yes. Different than a fixed tube, yes.

21 Q. Different than a fixed tube?

22 A. Yes.

23 Q. And it's different because it can lengthen
24 and shorten?

25 A. Correct. The idea of the conveyor is you

1 have some mechanical mechanism helping direct the
2 material from one place to another, and that certainly
3 has a mechanical component that helps direct material
4 from one place to another. So, say, yeah, it beats a
5 general definition of conveyor. Not a belt conveyor,
6 certainly but --

7 Q. I believe earlier you said that a conveyor
8 moves the material. It imparts movement to the
9 material; is that correct?

10 MS. FLANNERY: Object to form.

11 A. No, sir. I don't think that was part of my
12 testimony. I think my testimony was that it had a
13 mechanical component that helps move the material from
14 one location to another.

15 Q. (BY MR. NYDEGGER) And so this discharge
16 spout, you're saying it has a mechanical component
17 because you can lengthen and shorten it?

18 A. Yes. So I would say it meets my general
19 definition of a conveyor. It's not a belt conveyor or
20 an auto conveyor or air conveyor, but probably so.

21 Yeah, I think I would want to spend some time
22 thinking about that, but I think it probably does.

23 Q. Okay. So is the -- can you move the chute of
24 Waldner vertically to change the vertical discharge?

25 A. Yes, sir. I'd have to spend some time

1 thinking about that because DYNETEK teaches the
2 conveyors clearly, different variety of conveyors.
3 It's an interesting question, kind of an interesting
4 hypothetical.

5 Q. For a given flow rate, do discharge chutes
6 such as that of Waldner have any advantages over belt
7 conveyors such as that of DYNETEK?

8 A. Can you just repeat the question, please?

9 Q. Sure. So for a given flow rate, do discharge
10 chutes such as that of Waldner have any advantages over
11 belt conveyors such as that of DYNETEK?

12 MS. FLANNERY: Object to form.

13 A. Yes, sir. For a given flow rate as to the
14 position in that direction, yes.

15 Q. (BY MR. NYDEGGER) What are those advantages?

16 A. It's simpler.

17 Q. Any others?

18 A. Not that I can think of. I mean, the results
19 are simpler, right? If it's simpler, it's more likely
20 a lot less expensive.

21 Q. Less expensive?

22 A. It's just whatever derived from being
23 simpler. They're easier to engineer, you know, there's
24 a lot of things that go into simpler.

25 Q. Is general moving parts part of simpler?

1 A. Yes.

2 Q. Less maintenance?

3 A. Maybe, but that's very dependent. I would
4 say not necessarily, no.

5 Q. You think the maintenance is same for a chute
6 and a belt conveyor such as that in DYNETEK?

7 MS. FLANNERY: Object to form.

8 A. I'm saying they could be, yes. The
9 maintenance could be very similar depending on the
10 chute and material and what you're using, et cetera,
11 yup.

12 Q. (BY MR. NYDEGGER) So all else being equal, a
13 chute is not going to require less maintenance than a
14 belt conveyor, flow rate, material, everything else is
15 equal?

16 MS. FLANNERY: Object to form.

17 A. Yeah, you got different considerations.
18 What's the wear on the chute that you're not going to
19 have on a belt, the friction wear, what's the
20 environmental exposure to the whatever metal the
21 chute's made out of. I'm saying there are situations I
22 can envision where maintenance on a chute could be very
23 similar or if not exceed that on a belt conveyor,
24 depending on the applications, I think materials,
25 exposure to the environment, et cetera.

1 Q. (BY MR. NYDEGGER) Okay. Would you agree that
2 chutes are less prone of breaking down than conveyor
3 belts, all else being equal?

4 MS. FLANNERY: Object to form.

5 A. I don't think you can say that necessarily,
6 not a precisionable chute like this.

7 Q. (BY MR. NYDEGGER) And for a given flow rate,
8 are chutes smaller than conveyor belts than belt
9 conveyor -- sorry -- yes, than belt conveyors?

10 MS. FLANNERY: Object to form.

11 A. What do you mean by smaller?

12 Q. (BY MR. NYDEGGER) Lighter?

13 A. That's -- I don't know. You're replacing
14 metal with air and with polymers. So does that offset
15 the additional weight of the frame and the motors, I
16 don't think you can answer that. I don't think that's
17 an answerable question, not in the general.

18 Q. Okay. So is that -- is your answer going to
19 the issue of it being smaller or lighter or both?

20 A. Smaller is I think the question you asked.

21 Q. Okay.

22 A. And -- well, and lighter. Smaller and
23 lighter both. Yes, both. I don't think you can say
24 broadly a chute is lighter than a belt assembly.

25 Q. Not even when you are maintaining the flow

1 rate constant?

2 A. No. I don't think you can say that,
3 generally.

4 Q. Okay.

5 A. You can say there maybe a tendency towards
6 that direction, but we don't think you can say it,
7 generally.

8 Q. Okay. Do chutes require smaller amounts?

9 MS. FLANNERY: Object to form.

10 A. I think that would depend on whether it's
11 lighter.

12 Q. (BY MR. NYDEGGER) Okay. Are the mounts for
13 chutes less complicated?

14 MS. FLANNERY: Object to form.

15 A. No, not necessarily. In my combination, I
16 generally picked up the mount of Waldner to mount
17 the -- to mount the belt assembly from DYNETEK, it may
18 or may not require some modification. DYNETEK says
19 that mounting options and stuff is stuff they can
20 handle easily. They do the FEA and whatever else. So,
21 no, I don't think it's necessarily more complicated.
22 It can be just as simple.

23 Q. (BY MR. NYDEGGER) Does DYNETEK talk about
24 mounts that can move from an operating position to a
25 transportal position?

1 A. No, no. It doesn't talk about that at all.
2 That's in Waldner.

3 MS. FLANNERY: I think we've gone
4 about an hour and 20, when you get a chance. Whenever
5 you get to a stopping point.

6 MR. NYDEGGER: We can go off the
7 record for a moment.

8 THE REPORTER: Going off the record at
9 11:41 a.m.

10 (Off the record.)

11 THE REPORTER: Back on the record at
12 11:52 a.m.

13 Q. (BY MR. NYDEGGER:) Welcome back, Dr. Durham.
14 Dr. Durham, during the break, did your counsel provide
15 you any -- did they speak to you about your testimony
16 at all?

17 A. No, sir.

18 Q. Okay. In Paragraph 118, you talked about
19 DYNETEK optimizing dust control. Do you see that?

20 A. Yes, sir.

21 Q. What is the basis for your opinion of the
22 conveyor system of DYNETEK optimizes dust control
23 better than that of Waldner?

24 A. For example, in DYNETEK, again, on that same
25 location where it's talking about the retractable

1 loading spout, "Retractable loading spouts with 3 to 60
2 feet of vertical travel and dust recovery," that's
3 where I gain that statement. As opposed to the open
4 chute clearly of Waldner, that has no protection from
5 dust control.

6 Q. So is it your understanding that Waldner uses
7 an open chute?

8 A. That's what's depicted in the images in the
9 figures.

10 Q. And you rendered your opinion based on the
11 understanding that Waldner uses an open chute, correct?

12 MS. FLANNERY: Object to form.

13 A. Generally speaking, right. There's no
14 teachings in Waldner about controlling dust. There are
15 teachings in DYNETEK about controlling dust. So I
16 think that's POSITA would recognize that advantage.

17 Q. (BY MR. NYDEGGER) What if Waldner uses a
18 closed chute, would that change your opinion at all?

19 MS. FLANNERY: Object to form.

20 A. If it uses a closed chute, there's probably
21 not a lot of difference between the two, but certainly,
22 I mean, if we look at Figure 22A, that appears to be an
23 open chute to me.

24 Q. (BY MR. NYDEGGER) Okay.

25 A. But, yeah, if it's closed, it's probably

1 similar dust control measures.

2 Q. Okay. Is it correct that the primary points
3 of dust creation occur at the transfer points within a
4 conveyor system?

5 MS. FLANNERY: Object to form.

6 A. I'd say that's generally an accurate
7 statement. Yeah, I can generally agree with that.

8 By the transfer points, you mean from moving
9 from one -- for example, from one belt to another in a
10 belt conveyor system or the discharge as we're talking
11 about, that's probably the areas of the most dust, yes.

12 Q. (BY MR. NYDEGGER) Okay.

13 A. I think maybe OSHA even says something about
14 that, yeah.

15 Q. Okay. Those are precisely the types of
16 transfer points that I'm referring to, so thank you for
17 clarifying.

18 How many transition points are there for the
19 aggregate in the chute of Waldner?

20 A. You're restricting it just to the chute?

21 Q. Yes.

22 A. The entire chute itself is kind of a transfer
23 point. It shouldn't be an open chute, but certainly
24 the discharge. I think Waldner teaches the telescoping
25 shroud for the intakes that would not be an area of

1 concern for dust control, but certainly in the
2 discharge and, it's an open chute, the entire chute.

3 Q. And if it's a closed chute?

4 A. Then just the discharge.

5 Q. Okay.

6 A. And so, yeah, that area between the chute and
7 the top of the silo.

8 Q. Okay. And how many transition points are
9 there for the conveyor of DYNETEK?

10 A. There would be one between the first conveyor
11 and the second, and you would not be concerned about
12 dust at the discharge because of their -- the shroud,
13 so it would be one.

14 Q. Okay.

15 A. Well, again, assume -- taking the teaching
16 from Waldner of a chute from 60, I think it's called
17 84. I don't remember the number exactly. Let me look
18 it up.

19 Yeah. I'm sorry. 248 in Figure 22A, so
20 taking that teaching from Waldner and applying it to
21 the addition of DYNETEK's teachings or DYNETEK itself
22 than just one between the first -- the first extension
23 conveyor and the second extension conveyor.

24 Q. Okay. And so the addition of the discharge
25 spout in DYNETEK, in your opinion, that -- that removes

1 a transition point of dust control concern?

2 A. It certainly limits the dust control
3 concerns, correct, yes, because you're able to control
4 that precisely in a vertical direction.

5 Q. Okay.

6 A. So there would be properly operated, there
7 would be no gap between the outlet of the discharge
8 spout and the intake of the -- in this case, the silo.

9 Q. Okay. And if we were to remove the discharge
10 spout of DYNETEK, then at that point, DYNETEK would
11 have one more transition point of dust concern than the
12 chute in Waldner, correct?

13 A. Yeah. If you remove protective mechanisms,
14 you would have created a small hazard certainly --

15 Q. Yeah.

16 A. Or that's true in any case --

17 Q. Or adversely, if we added a discharge spout
18 to the chute of Waldner, then Waldner would have zero
19 transition points of dust concern, correct, and DYNETEK
20 would have one?

21 MS. FLANNERY: Object to form.

22 A. Well, I believe that Waldner does have a
23 discharge spout, or at least it appears that way to me.
24 That's my opinion that it does, but it's not a
25 retractable discharge spout.

1 So you can envision operating this, I need to
2 position this single sliding chute in a particular
3 orientation and get a specific rate that creates at
4 least the -- hypertension there will be a gap between
5 that discharge spout of Waldner and the top of the
6 silo. Because it's figured -- it's pictured very --
7 very small, very short and certainly not retractable in
8 the teachings of Waldner.

9 Q. (BY MR. NYDEGGER) So my question is really,
10 if we put a retractable discharge spout on Waldner and
11 then we compared the transition points of dust control
12 concern at that point so the discharge spouts on the
13 two devices are equal at that point, there would be a
14 difference of one transition point of dust concern,
15 correct?

16 MS. FLANNERY: Sorry. Object to form.

17 A. If you're using an open conveyor on Waldner.
18 Waldner also teaches either in 2005 or in 2014 --

19 Q. (BY MR. NYDEGGER) Wait, I'm sorry. You're --

20 A. I'm sorry.

21 Q. -- saying Waldner, but you're looking at
22 DYNETEK.

23 A. I'm sorry, DYNETEK. By the way, I made that
24 mistake once in the declaration as well. I wanted to
25 point that out. We're about to get to it. Paragraph

1 120, the second sentence of Paragraph 120, if you want
2 to look there.

3 Q. Okay. I'm there.

4 A. The second sentence reads, "Waldner's
5 discharge system is sold as a component," and then goes
6 on. That should read, "DYNETEK's discharge system is
7 sold as a component." So since we're talking -- since
8 I made the mistake right here, wherever I made it, it's
9 in the declaration as well.

10 Q. Okay. I appreciate that. Thank you.

11 A. But, nevertheless, DYNETEK, again, on Page 2
12 of Exhibit 1005 teaches belt conveyor based
13 Econoloaders consist of two open or enclosed conveying
14 arms, each containing its own belt conveyor.

15 So to the extent you're concerned about dust
16 control, which a POSITA would be, you would be
17 motivated to select the enclosed conveying arms. And
18 then with all the assumptions we've made, an enclosed
19 discharge to -- of closed discharge chute of Waldner
20 adding in the dust control shroud of DYNETEK or similar
21 one, then they would each have zero.

22 Q. Okay.

23 A. If that makes sense.

24 Q. Okay.

25 A. Zero -- not zero transition points. Zero

1 transition points of a concern from a dust control.

2 Q. Of a --

3 A. Correct.

4 Q. -- sorry. If we just talk about transition
5 points, how many transition points does each have?

6 MS. FLANNERY: Object to form.

7 A. Does each?

8 Q. (BY MR. NYDEGGER) Sorry, how many transition
9 points -- so now we're just talking about transition
10 points of the aggregate material.

11 A. Ignoring dust control concerns?

12 Q. Ignoring dust control concerns.

13 A. Okay.

14 Q. How many transition points does DYNETEK have
15 as compared to Waldner?

16 A. One more. So you count the intake, you count
17 the discharge and then DYNA- -- assuming, again, an
18 enclosed tube or enclosed chute, which is I think your
19 assumption, then DYNETEK would have one more.

20 If you're not talking about dust control,
21 just counting, it would have one more, the one in the
22 middle.

23 Q. Okay. Thank you.

24 If you turn in Waldner to Column 25 and read
25 Lines 7 to 14, please.

1 A. Waldner 25. 25, 7 to 14, to make sure I'm in
2 the right place?

3 Q. Yes.

4 A. "Referring to Figure 22, a discharge chute
5 No. 242 of the bucket elevator 50 prime is of a
6 telescopically adjustable length having a proximal
7 Section 244 and a distal Section 246 that are slidely
8 coupled together and collectively form an enclosed
9 tubular passage from an inlet end 244A of the proximal
10 section to an opposing discharge end tubing 246A of the
11 distal section.

12 "A flexible conduit 248 is connectable
13 between the downward outlet port 60 at the upper outlet
14 end of the bucket elevator 50 prime and the inlet in
15 244A of the discharge No. 242."

16 Q. Okay. Thank you.

17 A. So my understanding was -- at least the one
18 was incorrect.

19 Q. Okay. So you now understand that the chute
20 in Waldner is an enclosed tube, correct?

21 A. Yes, it at least teaches that. Yes.

22 Q. Okay. So in that same paragraph of 118 of
23 your declaration, you state that, "implementing the
24 conveyor of DYNETEK would 'enhance mechanical
25 control.'"

1 A. Correct.

2 Q. Over that of the chute of Waldner.

3 Can you explain to me how DYNETEK's conveyor
4 would enhance mechanical control?

5 A. Yes, well that has kind of two forms. You're
6 enhancing mechanical control because you can directly
7 control a discharge rate. And you're enhancing
8 mechanical control because of a second adjustable point
9 near the distal end that allows you for more precise
10 measurement or more precise position as we discussed
11 earlier.

12 Q. Okay. You indicate that a POSITA would want
13 to optimize Waldner's design. Do you see that?

14 A. Yes, sir.

15 Q. And what specific aspects of Waldner's
16 functionality performance would a POSITA have been
17 trying to optimize?

18 A. Well, just things we've been talking about.
19 The ability to control rate, ability, precision work
20 precisely, the ability to control dust, maximize
21 rotation so you can have more -- more range of motion.
22 Maximize position so you can get closer. You can
23 imagine, for example, it would be very difficult in --
24 or not difficult, but -- or not impossible, but
25 difficult to position the chute directly beneath within

1 3 feet in Waldner, whereas, you have that option with
2 DYNATEK. And, additionally, we -- you couldn't go past
3 180 degrees or thereabouts as we discussed earlier.

4 So those are the areas that would be dust
5 control position, rate control, just as I talk about in
6 that Paragraph 118.

7 Q. Okay. And how long had those needs for
8 optimization existed in the industry?

9 MS. FLANNERY: Object to form.

10 A. I would say at least since the time of
11 Waldner. So you're -- if you're going to optimize
12 Waldner, it starts -- Waldner. It starts with Waldner.

13 Q. (BY MR. NYDEGGER) Okay. And so those needs
14 existed at the time of Waldner, correct?

15 A. Yes.

16 Q. Okay.

17 A. Waldner provides one solution that can be
18 improved on and would have been.

19 Q. Does the discharge chute of Waldner need to
20 be side-to-side level?

21 MS. FLANNERY: Object to form.

22 A. Side-to-side level? Can you -- I think I
23 know what you mean, but can you maybe clarify what you
24 mean by that?

25 Q. (BY MR. NYDEGGER) Well, let me step back. So

1 the discharge chute of Waldner is a tube, correct?

2 A. Yes, sir, it's an enclosed tube.

3 Q. And because an enclosed tube, there is no
4 requirement that there's any kind of leveling between
5 the left side of the tube and the right side of the
6 tube, correct?

7 A. If you're standing at the -- taking left and
8 right to mean you're standing at the -- the elevating
9 assembly and looking towards the distal end of the tube
10 not left to right.

11 Q. That's correct.

12 A. Okay. Then, no, there wouldn't be.
13 Similarly, there wouldn't necessarily be an enclosed
14 conveyor system of DYNETEK.

15 Q. Okay.

16 A. Well, there may be optimal locations, of
17 course, but more optimal to both but...

18 Q. Okay. In your opinion, would placing the
19 conveyor system of DYNETEK on to the bucket elevator
20 system of Waldner be a complex alteration to the system
21 of Waldner?

22 MS. FLANNERY: Object to form.

23 A. Are you talking about the embodiment where
24 we're substituting Waldner for DYNETEK? I'm sorry.
25 Substituting DYNETEK for Waldner chute or taking the

1 teachings because the answer may be a little bit
2 different.

3 Q. (BY MR. NYDEGGER) No. I'm not talking about
4 a direct substitution.

5 A. Okay.

6 Q. I'm talking from more a conceptual level of
7 taking a belt conveyor system like that of DYNETEK and
8 implementing that in place of the chute of Waldner.

9 A. Okay. So the question -- just a quick,
10 remind me of the question -- the end the question now.

11 Q. Yeah. The question, I'm trying to get an
12 understanding of in your view how complex that
13 alteration to Waldner would be.

14 A. It would be -- relatively speaking, there
15 would be some additional complexity. DYNETEK teaches
16 that's complexity that they're used to dealing with and
17 to solve, so there wouldn't be any reason that a POSITA
18 would not have the expectation of success. But it
19 would add some complexity. You're adding a second
20 pivot point and a belt conveyor so there's some
21 complexity with that.

22 Q. Okay. But those complexities would not, in
23 your opinion, outweigh the advantages obtained by
24 additional or range of motion in mechanical precision,
25 correct?

1 A. It does control, yes. I believe that all the
2 advantages would outweigh the disadvantages.

3 Q. Okay.

4 A. And would have been to a POSITA with
5 knowledge at DYNETEK.

6 Q. Can you identify what those foreseeable
7 complexities would be?

8 A. Sure. I mean, it's the addition of a
9 conveyor. So you have a conveying mechanism, and
10 the -- how you drive that or whether it's hydraulic or
11 electric motors, such as additional complexity. So
12 you're adding moving parts and you have a second pivot
13 point, so you're adding moving parts there.

14 And there's a third moving part at the -- or
15 third group of moving parts, if you will, in the
16 extension assembly for the shroud that would be the
17 more complex components of the system.

18 Q. Okay. And we've already covered this to some
19 degree, but what is your opinion about the complexity
20 of the mounting system? Would that change at all?

21 A. It would depend. The complexity would not
22 necessarily change. The size of the members may
23 change, which I believe you could use the same mounting
24 assembly by taking those teachings. We're not doing a
25 direct substitution by taking those teachings and

1 applying them to Waldner. You can use the same
2 mounting -- the same, conceptually, the same mounting
3 assembly, a pin-type assembly.

4 Q. Do you discern any difference in the type of
5 conveyor disclosed in the 689 Patent and that disclosed
6 in DYNETEK?

7 MS. FLANNERY: Object to form.

8 A. Well, there's multiple types of conveyor
9 systems in 68 -- I'm sorry -- are you talking about 689
10 or Waldner?

11 Q. (BY MR. NYDEGGER) 689.

12 A. Well, there's multiple types, again, in 689,
13 so there would be differences.

14 Q. Okay. What differences?

15 A. Well, for example, there's a bucket conveyor
16 in the 689 system, so that would be different than a
17 belt conveyor, but of the examples that DYNETEK
18 provides.

19 Q. Let me narrow my question a little bit.

20 Do you discern any difference in the type of
21 discharge conveyor used in the 689 Patent and that
22 disclosed in DYNETEK?

23 A. Do you have 689 I can take a look at?

24 Q. I do. This is a copy of Exhibit 1001.

25 (Exhibit No. 1001 referenced.)

1 A. Thank you. Well, turning to the claim
2 language where, of course, I spent most of my time. Of
3 course, I read this specification. The claim language
4 I would say it's different in there's much broader than
5 the teaching of DYNETEK.

6 So in that regard, there's differences.
7 Looking at the figures, some of the figures, like,
8 Figure 1A, for example, shows a system that appears to
9 be different, at least in appearance from that of
10 DYNETEK.

11 Q. (BY MR. NYDEGGER) What difference do there
12 appear to be?

13 A. It just -- it -- the -- maybe not, but it
14 appears to be somewhat different in that maybe the
15 first conveyor, you know, it's not to scale so it's
16 hard to say. The first conveyor is much longer than
17 the second. So I'd look at some other figures, like,
18 5A. All of the figure 5s, they look --

19 Q. So I'm not -- and perhaps I can remind you
20 more specifically of the question that I asked --

21 A. Yeah, there do appear that there are
22 differences.

23 Q. I'm -- I asked if there are differences in
24 the types of conveyors.

25 A. Oh, the types of conveyors?

1 Q. Yes.

2 A. No, they both have belt conveyors, if that's
3 -- or, at least, let me look at the claim language
4 again.

5 The claim language, again, is very broad.
6 So, no -- the claim language may or may not be broader
7 than the disclosure of DYNETEK and the type of
8 conveyors, but I think in the special -- in the
9 specification, it largely talks about belt conveyors
10 for that extension symbols that they would be similar
11 types.

12 Q. Okay.

13 A. Because DYNETEK has belt conveyors as well.

14 Q. So, in your opinion, what functions would a
15 POSITA determine that the mounting system used to mount
16 a belt conveyor system like that of DYNETEK to a bucket
17 elevator system like that of Waldner?

18 MS. FLANNERY: Object to form.

19 A. Could you restate the -- just read it again,
20 if you would.

21 Q. (BY MR. NYDEGGER) Sure. I'm asking about
22 what functions the mounting system used, would need to
23 perform to mount a belt conveyor system like that of
24 DYNETEK to a bucket elevator system like that of
25 Waldner. What functions would a POSITA looking at that

1 mounting system determine, okay, this mounting system
2 needs to perform functions one, two, three?

3 MS. FLANNERY: Object to form.

4 A. There would be no difference in the function
5 of the mounting system between one or the other. The
6 function mounting system was allow it to be just as the
7 claims claim position from a stored position to an
8 operational position to hold it onto the -- what in the
9 operational position, hold it to the vertical assembly
10 50 or 50 prime, for example, Waldner and to allow it to
11 rotate horizontally in a similar manner to that of the
12 chute conveyor system.

13 What it would not need to do is to be able to
14 position vertically in between stored and operational,
15 like Waldner would do, so there would be some
16 simplification there and function.

17 Q. (BY MR. NYDEGGER) Okay. I want to make sure
18 I understand. So one function would be it would need
19 to secure it to the bucket elevator frame when it's in
20 the operational position?

21 A. Yes.

22 Q. It would need to be moveable between a
23 transportable position and an operational position?

24 A. Yes.

25 Q. And it would need to be able to rotate

1 horizontally?

2 A. Yes, rotated out of vertical access so that
3 would be horizontal, yes. Let me check the claims and
4 see what else. But those are the main parts.

5 If you're just talking about the mounting,
6 yes, I believe, that would encompass it.

7 Q. Any other functions it would need to perform
8 that you can think of that would be essential?

9 A. Not that I can think of right now.

10 Q. Okay. Did you discern any differences in the
11 mounting system for the conveyors in the 689 Patent and
12 the mounting system for the chute in Waldner?

13 A. Yes.

14 Q. What differences?

15 A. Again, divorce from the claim language
16 because the claim language is what it is.

17 Q. Yes, just the differences in the teachings of
18 the two?

19 MS. FLANNERY: Object to form. Sorry.

20 A. Waldner teaches a pin mounting system for the
21 rotating portion and a hydraulic actuator kind of
22 extending from the frame outward towards the chute for
23 positioning. It looks like in the 689 Patent looks
24 like a different mounting, not a pin, but maybe a
25 slewing bearing or something similar at the supporting

1 the conveyor system.

2 And the hydraulic actuator works differently.

3 It's mounted behind the horizontal pivot point which
4 allows for vertical motion. It's mounted behind that
5 and it extends downward to raise the conveyor extension
6 assembly as opposed to Waldner is underneath to support
7 it and raise it. So that's a difference. There may be
8 other details but those are the largest ones.

9 Q. (BY MR. NYDEGGER) So then if we compared the
10 teachings of Waldner to the claimed mounting system in
11 the 689 Patent, do you see differences there?

12 A. No.

13 Q. So is it correct then that your opinion did
14 not consider any differences in the mounting system
15 disclosed in the 689 Patent claim language in the
16 mounting system of Waldner and whether that would
17 impact how a POSITA would have viewed the likelihood
18 success in using the combination of the mounting system
19 like Waldner and the conveyor system like DYNETEK?

20 MS. FLANNERY: Object to form.

21 A. No, I disagree.

22 Q. (BY MR. NYDEGGER) Explain your disagreement.

23 A. Well, you tied it back to the claim language.

24 Q. Yes.

25 A. So in the claim language, I believe that

1 disclosure of the mounting system and Waldner directly
2 discloses the functions claimed in the claims of the
3 mounting system, so I don't think there are any
4 differences.

5 Q. Okay. So if you go to Paragraph 167.

6 A. If we're going to a completely area that may
7 take a bit, it may be a good time for lunch, but if
8 it's quick, that's fine.

9 Q. I think this one will be fairly quick.

10 A. Okay.

11 Q. So in Paragraph 167, you opine that the
12 discharge Member 24 of Waldner is, "In any horizontal
13 orientation" in that the "discharge member is
14 substantially perpendicular to the deployable frame of
15 the aggregate elevating assembly." Do you see that?

16 A. Yes, sir.

17 Q. Isn't it true that a POSITA would understand
18 a discharge chute like Waldner's relies on gravity to
19 function and therefore cannot be in a near horizontal
20 orientation at substantially perpendicular to the
21 elevating assembly?

22 MS. FLANNERY: Object to form.

23 A. I disagree. It can be near horizontal. It
24 can't be perfectly horizontal, but it certainly can be
25 near horizontal and still slide aggregate out the

1 chute, sure.

2 Q. (BY MR. NYDEGGER) And so --

3 A. And so in operation for the -- as we talked
4 about earlier, in the operation in the long reach is
5 going to be near horizontal.

6 Q. Okay. In your opinion, what's the minimal
7 angle at which the Waldner chute could reasonably
8 operate?

9 A. That would depend on an awful lot of things.
10 I can't give it a degree on that because it depends on
11 things like the coefficient of friction in the chute,
12 materials, the density of the aggregate, and probably a
13 variety of other things I haven't thought about on the
14 spot. But it could be -- it could be near horizontal.
15 It certainly could.

16 MR. NYDEGGER: Why don't we break for
17 lunch.

18 MS. FLANNERY: Okay.

19 THE REPORTER: Going off the record at
20 12:24 p.m.

21 (Lunch break.)

22 THE REPORTER: Back on the record at
23 1:11 p.m.

24 Q. (BY MR. NYDEGGER) Welcome back, Dr. Durham.
25 Do you understand that you're still under oath?

1 A. Yes, sir.

2 Q. Okay. Dr. Durham, how much time
3 approximately did you spend drafting your initial draft
4 here of the declaration?

5 A. Wow, I can't even remember that timeframe.
6 For something of this length, it would have been
7 multiple weeks' worth of work.

8 Q. Okay. And then additional time revising
9 and --

10 A. Well, yes, I'm kind of collapsing the
11 process, but the first draft probably took me -- I
12 don't know, several weeks. And then there were several
13 more weeks of back and forth and editing, revising,
14 refining.

15 Q. Okay. If you could -- well, Claim 6 of the
16 689 Patent requires a conveyor support frame that
17 supports the extension conveyor relative to the
18 aggregate elevating assembly.

19 A. Okay. 6A is what I called that section, I
20 think; is that right? Let's see. "Support frame being
21 moveable with respect to the deployable frame of the
22 aggregate elevating assembly," is that the part you
23 said?

24 Q. Yeah. So the "conveyor support frame that
25 supports the extension conveyor relative to the

1 aggregate elevating assembly and it's moveable with
2 respect to the deployable frame of the aggregate
3 elevating assembly -- "

4 A. Yes, sir.

5 Q. "When the extension conveyor moves between
6 the lower position and the raised position."

7 A. Yes, sir. In 6A. Yes, sir.

8 Q. Do you see that?

9 A. Yes, sir.

10 Q. Okay. And if you go to Figure 22 A of
11 Waldner?

12 A. Yes, sir.

13 Q. Do you see that?

14 A. Yes, sir.

15 Q. The frame 254 of Waldner corresponds in your
16 opinion to the aggregate elevated assembly of Claim 6,
17 correct?

18 A. Well, I think 254 is a member. It's 50 prime
19 in 22A.

20 Q. Okay. 50 Prime and 254 is a member of that?

21 A. A member of that. Yes, sir. I guess they
22 didn't -- I'm sorry, the frame. 254 is the frame of
23 bucket elevator 50 or 50 Prime, yes.

24 Q. Okay. And so looking at that, that same
25 Figure of 22A, do you agree that the brackets 252A and

1 252B do not move relative to the frame 254 when
2 discharge chute moves between the raised and lowered
3 positions. Raised and lowered meaning the operational
4 and transport positions?

5 MS. FLANNERY: Object to form.

6 A. Brackets 252 and 252A and 252B, do not move
7 in that operation.

8 Q. (BY MR. NYDEGGER) Okay.

9 A. From my understanding of it, yes.

10 Q. Okay. Those brackets 252A and B, are in a
11 fixed relationship to the Frame 254, correct?

12 A. That's my understanding. Yes, sir.

13 Q. Okay. And then if you look at the lengths
14 256 and 262, in that same figure?

15 A. Okay.

16 Q. Did you find those?

17 A. Yes, sir.

18 Q. Those lengths do not move relative to the
19 Frame 254 when the discharge chute moves from the
20 operational, between the operational and transport
21 positions, correct?

22 A. My recollection is they do, but I'm trying to
23 have trouble with that right now, hold on a second.

24 That's -- I think that's right. 256 and 262
25 would not, is not part of that reason lowering

1 assembly, correct. That's part of the horizontal swing
2 assembly.

3 Q. All right. Okay. Yeah, so those lengths are
4 -- they move -- they pivot horizontally about a
5 vertical pivot point, correct?

6 A. Right. So they would be movable going from
7 an operational position to a completely stored position
8 unless -- unless you're starting from operational
9 position that's perfectly perpendicular so you'd have
10 to swing it back into place. So they would be moveable
11 in that circumstance.

12 Q. Okay. But they don't -- they control
13 movement horizontally -- they move when the chute moves
14 horizontally?

15 A. Correct.

16 Q. Correct?

17 A. Right. Right. So they would move, if you're
18 20 degrees off center and you're going to store they
19 would move.

20 Q. Okay. But -- so if you're going to the
21 storage position they would move to bring the chute to
22 whatever horizontal position is necessary for it to
23 then move vertically?

24 A. Uh-huh. I doubt it would be operated in two
25 steps. It more likely be operated in one step, you're

1 moving it as diagonal towards the storage position,
2 yes.

3 Q. Okay. Does -- does Waldner teach whether
4 that's done in one step or two steps?

5 A. It doesn't differentiate.

6 Q. Okay. But at any rate we agree that those
7 lengths 256 and 262 are for horizontal movement of the
8 chute, correct?

9 A. Yes, sir. That's correct.

10 Q. Okay. And then if you look at the pivot pins
11 258 and 264?

12 A. Okay. Correct, I see those.

13 Q. Okay. And do you agree that the pivot pins
14 258 and 264 in Waldner, they do not move relative to
15 the frame when the discharge chute raises and lowers
16 between the operational and storage positions?

17 A. No, I think those pivot points would move.
18 Those are part of the mechanism for lowering and
19 raising.

20 Q. So you think that the -- the, that the pins
21 themselves move?

22 A. Yes, they would rotate.

23 Q. Okay. Not that the links attached to those
24 pins rotate, but that the pins themselves rotate?

25 A. Yes, the pins are going to rotate that.

1 Q. Okay.

2 A. Yes, the frame also would rotate. The links
3 on the discharge chute would also rotate, but the pins
4 would likely move, rotate as well.

5 Q. I believe you said the frame would rotate,
6 what frame are you talking about?

7 A. The support mechanism for the, like, that
8 bracket attached to 258, between 258 and bottom of the
9 discharge chute, doesn't have a number. That would
10 rotate in vertical orientation and -- that would rotate
11 vertically around the horizontal access and the raise
12 would lower as would the pin. Waldner does not teach
13 the pin is fixed in anyway.

14 Q. Okay. So it's your opinion that the -- let's
15 just talk about Pin 258?

16 A. Uh-huh.

17 Q. That is a horizontal pivot point for the
18 chute, correct?

19 A. Correct, that's correct.

20 Q. And it's your testimony that that horizontal
21 pivot point 258 will move relative to the frame?

22 A. Uh-huh.

23 Q. When the chute lowers, moves between an
24 operational transportation position?

25 A. It would move both relative to the frame

1 that's attached to 50, 50 prime in this figure and the
2 frame that is attaches that pin to the discharge chute,
3 that shows the triangle around 258. It would move
4 relative to both.

5 Q. Okay. Let me be a little bit more precise
6 because we're talk about multiple frame parts here?

7 A. Uh-huh.

8 Q. So let's talk about the Frame 254.

9 A. Okay.

10 Q. So when the chute moves from a
11 transportation, between transportation and operational
12 positions, is it your opinion that Pin 258 moves
13 relative to the Frame 254?

14 A. Yes, it would rotate relative to Frame 254.

15 Q. Okay. And can you explain what you mean when
16 you say it would rotate?

17 A. Waldner teaches that those are pins. They're
18 not fixed rods. They're pins that go through and
19 attach the discharge chute from one end to the other.
20 So there's no teaching that that rod, is -- or that pin
21 is fixed relative to the frame.

22 So as you're rotating the chute downward,
23 friction is going to dictate that that pin is going to
24 rotate some as well. It would rotate most likely --
25 rotate relative to the frame for sure, and also more

1 likely than not relative to the -- I'm sorry, will
2 rotate relative to Frame 254 for sure and also rotate
3 relative to the bucket or the discharge chute including
4 its frame.

5 Q. Okay.

6 A. Yeah.

7 Q. So is it correct then that the -- the three
8 dimensional location of the pin will not change, but
9 the pin will -- will spin or rotate within that three
10 dimensional position?

11 A. Correct. That's right. That's accurate.

12 Q. Okay. I believe we understand each other,
13 thank you.

14 Let's see have I given you a copy of Sleeman
15 yet?

16 A. No, sir.

17 MR. NYDEGGER: I'm giving you these
18 just because I don't want to take them home.

19 MS. FLANNERY: Yeah.

20 MR. NYDEGGER: You can continue to
21 ignore them.

22 (Laughter.)

23 Q. (BY MR. NYDEGGER:) Would you look at Figure
24 12 of Sleeman, please?

25 A. Yes, sir. I got that.

1 Q. Okay. Do you agree that the swing actuator
2 68 in Figure 12 of Sleeman acts on the rack 66?

3 A. Yes.

4 Q. And when the swing actuator 68 moves rack 66,
5 do you agree that rack 66 rotates the gear member 64
6 about a vertical shaft 62?

7 A. Yes, sir. That's correct.

8 Q. And you also agree that when the gear member
9 64 rotates about the vertical shaft 62, the spout 50
10 moves horizontally left to right?

11 A. Yes, sir.

12 Q. So do you agree that the swing actuator 68
13 does not move the spout 50 between a raised and lowered
14 positions?

15 MS. FLANNERY: Object to form.

16 A. Yes, for that 62 rotated about 62 moves in
17 the horizontal direction.

18 (Reporter clarification.)

19 A. Moves in the horizontal.

20 62 provides a vertical pivot point that it
21 moves around in the horizontal direction.

22 Q. (BY MR. NYDEGGER:) Okay. Thank you.
23 Dr. Durham, I'm handing you pages 8 and 9 of Exhibit
24 1004 which is Waldner?

25 A. Waldner, okay.

1 Q. These are copies of Figures 6 and 7 of
2 Waldner; do you see that?

3 A. Yes, sir.

4 Q. And if in your declaration you opine that a
5 POSITA would place the King pin of Auld or the hitch
6 coupler of Auld directly on to the bucket elevator,
7 correct?

8 A. Yes, sir. Taking those advantages.

9 Q. And I'm handing you a red marker, could you
10 indicate on those Figures 6 and or 7 where a POSITA
11 would place the, either the King pin of Auld or the
12 hitch coupler of Waldner on the?

13 A. Sure. In order to gain those benefits of the
14 shorter trailer that I described, the Frame 12A would
15 be severed if you will at the point I've marked the
16 vertical line here, and then you would put the King pin
17 there.

18 (Witness marking.)

19 A. And you can see you have a relative same
20 elevation as the hitch coupler 22, at least very close
21 and you would gain the benefits of that shorter
22 trailer; or conversely a longer elevating assembly for
23 the same length of trailer as I described relative to
24 Auld.

25 Q. (BY MR. NYDEGGER) Okay. And, so could you

1 just label those two markings that you've made on
2 there?

3 A. Sure.

4 Q. You can use a pen if it's easier to write
5 words for the labeling portion --

6 A. Sure. So this would be the King pin I'll
7 just call it King Pin understanding it's either King
8 pin or it's coupler 22 there, and then this location
9 would be a new leading edge of the trailer of 12A.

10 Q. And can you make some more markings on figure
11 7?

12 A. I can't see the -- I can show the -- I can
13 draw a dash line on the new leading edge, and you
14 cannot see the location of the King pin or hitch cup 22
15 because it's the top down view and it would be on the
16 bottom side.

17 Q. Okay. Can you indicate where it would be on
18 the -- I understand that it would not be visible, but
19 could you maybe draw a dotted and you can just label it
20 as appropriate?

21 A. Somewhere in that location. Of course, you
22 would also (phonetic) variate to be more centered, but
23 that would be where it would be.

24 Q. You say you would vary it to be more
25 centered --

1 A. Sure.

2 Q. -- How would you do that?

3 A. Switch the stores locations of the power
4 supply -- I'm sorry, 38. Yeah, I think it's the power
5 supply and the ramps, which way is which -- oh, no it's
6 42 and 44 and this one 44 is located on the, what would
7 be the driver side, so you flip those locations to have
8 that King pin be more centered so it would be totally
9 easier.

10 Q. So I'm -- I'm looking at Figure 7, the top
11 down view?

12 A. Yes, sir.

13 Q. And you indicated that you would switch the
14 locations of the elevator, bucket elevator 52?

15 A. Right.

16 Q. With the conveyor belts 42 and 44?

17 A. Right. And then arrange the King pin, it may
18 not be in the dead center of that bucket elevator 50--
19 52 in this figure it's offset from that, but it would
20 be closer to center line or more center line than it is
21 in this orientation just as Auld teaches.

22 Auld teaches that it would be a location
23 there on that vertical silo and a POSITA would
24 understand it would be more centered.

25 Q. I'm trying to understand how -- it appears me

1 looking at Figure 7, that the conveyor is 42 and 44 are
2 located all the way to the edge of the driver side of
3 the trailer --

4 A. Correct.

5 Q. -- is that correct?

6 A. Yes, sir. I agree with that.

7 Q. And then -- and the bucket elevator is right
8 next to those, correct?

9 A. Moreless.

10 Q. And so I'm -- I'm not following your
11 statement that moving the conveyor's 42, 44 all the way
12 to the passenger side of the conveyor and moving the
13 bucket elevator to the driver side of the trailer would
14 make the bucket elevator anymore center than it is in
15 its current configuration. It would just be off
16 centered to the other side?

17 A. Generally, I disagree but to the extent that
18 that's true a POSITA would certainly understand the
19 hitch cup would be, or the King pin would centered or
20 more along the center line for each trailer. So you
21 would arrange it that way. I think if you flip 42, and
22 44 to the other side because of the configuration of 52
23 and its base assembly and that 56 area, I think it
24 would be more centered, that's my view of it, but...

25 In other words, a POSITA would understand it

1 would need to be centered and then arrange the trailer
2 in such a way.

3 Q. And so moving the -- is it correct then in
4 your opinion moving the King pin to attach to the
5 bucket elevator would require completely re-configuring
6 the arrangement of -- of at least the bucket elevator
7 and the two conveyors 42 and 44 on the trailer?

8 MS. FLANNERY: Object to form.

9 A. It would require some rearranging so that the
10 King pin is centered. I think an easy way to do that
11 would be to flip those two and then move the King pin
12 more towards the passenger side of the bucket elevator,
13 but there's other ways you can go about that.

14 Q. (BY MR. NYDEGGER) But then that would also
15 require moving the component 38 as well, correct?

16 A. Yeah, that's a hole in the deck, that's easy
17 to move.

18 Q. And it's your opinion that a POSITA would
19 have embarked on this re-design of Waldner to get rid
20 of the metal on the -- the gooseneck on the trailer?

21 MS. FLANNERY: Object to form.

22 A. There's several, I talked about several
23 advantages. A King pin would distribute the load more
24 evenly on the towing vehicle that's why they're used on
25 semi-trucks, for example, and large loads all the time.

1 A King pin would allow, having a King pin at
2 that location would allow the trailer to be shorter or
3 the bucket elevator to be longer, both of which are
4 advantages. And so I think the simple re-arrangement
5 or the simple location of a very simple solid metal
6 King pin, putting that on the center line would have
7 been very easy for POSITA to do and would have done it
8 to gain those benefits.

9 Q. Okay. And it's your opinion that the POSITA
10 could have accomplished that without -- without
11 changing the width dimensions of the trailer at all; is
12 that correct?

13 A. Sure.

14 MS. FLANNERY: Object to form.

15 A. Yes, sir. That's my opinion.

16 Q. (BY MR. NYDEGGER:) Okay. Dr. Durham, I'm
17 handing you a copy of Exhibit 1011 that's the McGyver
18 reference; do you see that?

19 (Exhibit No. 1011 marked.)

20 A. Yes, sir.

21 MR. NYDEGGER: And there's our lost
22 Waldner copy.

23 MS. FLANNERY: He'll need the same
24 page.

25 Q. (BY MR. NYDEGGER:) Dr. Durham, do you agree

1 with me that the McGyver reference is not directed to
2 conveyor system for conveying aggregate material?

3 A. It's not directly directed towards that, it's
4 certain related technology it's the silo that the
5 conveyor simply fills.

6 Q. Do you agree that McGyver does not discuss
7 conveyors at all?

8 MS. FLANNERY: Object to form.

9 (Witness looking through exhibit.)

10 A. I disagree.

11 Q. (BY MR. NYDEGGER) Okay. Why do you disagree?

12 A. Well, at least one locations Column 5
13 starting at line 51 through, let's say through 63
14 discusses fill tubes which are conveyor.

15 Q. Okay.

16 A. Or at least that location. And then there's,
17 in the next paragraph 6 -- I'm sorry, the next Column 6
18 it talks about shuttle conveyors. Conveyors move
19 material such as sand to the incline or incline chutes.
20 So 6, 25 through 49, 48, somewhere in that talks about
21 conveyors as well. So at least those two locations.

22 Q. Okay. Does McGyver contain teachings that
23 enhance the control of the discharge of the conveyor
24 system?

25 A. Yes.

1 Q. Okay. Where is that located?

2 A. Again, Column -- at least Column 5 and
3 starting at line 48 talks about the air boost system,
4 reduces the time required for sentence of a filing from
5 the air boost system, a blower with variable speed
6 drive allows a constant pressure air delivery to
7 multiple fill tubes which that, having that variable
8 speed drive in that air system would enhance the
9 discharge of the sand into the silo, at least that
10 location.

11 Q. And your opinion is that enhances the -- that
12 enhances the control of the conveyor system over --
13 over the teachings of Waldner?

14 MS. FLANNERY: Object to form.

15 A. I don't know if I know the answer to that.
16 They're different types of conveyor systems, so you
17 wouldn't be concerned about an air pressure on the belt
18 conveyors of Waldner, or the chute, the discharge chute
19 -- well, I don't know. If he were to apply that, which
20 I did not in combination, if you were to apply that to
21 the discharge chute, you would have the same benefits
22 you would in McGyver. Yes, you would have the ability
23 to have more control over the discharge of the sand or
24 the aggregate.

25 Q. (BY MR. NYDEGGER) So is this teaching of

1 McGyver about an air boost system a reason for
2 combining McGyver with Waldner as you have in your
3 opinion?

4 A. No.

5 Q. And is the discussion of conveyors in McGyver
6 a reason for combining McGyver with the teachings of
7 Waldner as you discuss in your declaration?

8 A. No, I don't think I've called that out as one
9 of the reasons to combine them. Just shows of how
10 related the technologies are.

11 Q. Did you rely on any teachings in McGyver
12 about the rotation of a discharge mechanism as a reason
13 for combining the teachings of McGyver with Waldner?

14 MS. FLANNERY: Object to form.

15 A. Well, certainly the rotation of that, those
16 tubes that are part of the silo would be rotation of
17 the discharge mechanism. So it's the same mechanism
18 that rotates the silo that rotates those conveyors, so
19 yes.

20 Q. (BY MR. NYDEGGER) So you relied on McGyver's
21 teachings about rotation of a discharge mechanism as a
22 reason to combine the teachings of the McGyver with
23 those of Waldner as you have in your declaration?

24 MS. FLANNERY: Object to form. Sorry,
25 go ahead.

1 A. -- yes. The linkage that rotates that I
2 point to in McGyver, it does control rotation of the
3 discharge mechanism. So, yes, that same linkage that I
4 talk about is used to control the rotation of the
5 discharge tubes.

6 Q. (BY MR. NYDEGGER) What discharge tubes are
7 you referring to?

8 A. The discharge tubes that are self contained
9 in the silo that -- we just talked about that in Column
10 5.

11 Q. And what are those discharge tubes
12 discharging to?

13 A. The silo.

14 Q. And did you say that the discharge chutes are
15 self contained within the silo?

16 A. Yeah, self contained with the silo. Yes.

17 Q. Oh, with the silo?

18 A. Right.

19 Q. Not inside?

20 A. Yeah, let's see. It's self contained. Self
21 contained. So I don't know if it says inside or
22 outside, but nevertheless. Either way it would work.
23 You can have it either way.

24 Q. So that -- that rotation -- that rotation
25 that you were referring to of the discharge tube --

1 tubes is rotation in an entirely different nature than
2 the rotation of the discharge chute in Waldner; is that
3 correct?

4 MS. FLANNERY: Object to form.

5 A. No, I'd say they're very very similar because
6 we're -- both cases we're talking about rotating from a
7 horizontal stored transportable configuration to a
8 vertical operational configuration. Specifically, the
9 bucket elevator 50 of Waldner.

10 Which, when the discharge chute is stored as
11 part of that bucket as shown in like Figure 10, I
12 believe of Waldner. Yes. Finish rotating the same,
13 almost identical to the rotation of the discharge tubes
14 in McGyver.

15 Q. (BY MR. NYDEGGER) Earlier when we discussed
16 the rotation, the discharge mechanism or the discharge
17 chute in Waldner, we were discussing moving the
18 discharge chute horizontally. For example to fill a
19 first silo and then to a second silo, and so forth. So
20 it's a horizontal movement that we were discussing
21 previously, correct?

22 A. That's one of the movements we discussed,
23 yes.

24 Q. Did we discuss movement of the discharge
25 mechanism from lying on the trailer to being set up

1 right?

2 A. No, I don't know think we discussed that yet.

3 Q. I didn't think so --

4 A. Think is the first time.

5 Q. -- all right. So perhaps that's why we're
6 having a passing in the night here.

7 So referring to the type of rotation of a
8 discharge chute that we discussed previously horizontal
9 rotation of the discharge chute in Waldner?

10 A. Okay.

11 Q. Did you rely on a similar rotation of a
12 discharge mechanism in McGyver as a reason for
13 combining these references?

14 MS. FLANNERY: Object to form.

15 A. It would certainly apply. That's not what I
16 pointed to. I pointed to the orientation from the
17 trailer vertical, but the same reasons would apply to
18 that actuator that moves the, moves it horizontal
19 almost identically. It would be more compact. You
20 could do two of them to cut down the size to handle the
21 same kind of load. Yes, so it would definitely be
22 applicable.

23 Q. (BY MR. NYDEGGER) Do the discharge mechanisms
24 in McGyver move horizontally?

25 A. McGyver doesn't discuss that. No, it don't.

1 McGyver only discusses movement from the stored to
2 operational. Not horizontal just the vertical.

3 Q. Okay. Does McGyver teach anything about the
4 reach for the discharge point of a conveyor system?

5 MS. FLANNERY: Object to form.

6 A. Could you rephrase the question.

7 Q. (BY MR. NYDEGGER) Yes, for example in
8 connection with Waldner we talked about how the reach
9 of Waldner's discharge chute has certain limitations.

10 For example, I believe it was your opinion
11 that the discharge chute from Waldner is limited to
12 approximately 180 degree rotation?

13 A. Correct, okay.

14 Q. Can't reach beyond that, correct?

15 A. Okay. Yes.

16 Q. And so my question is whether, whether you
17 relied on any teaching of McGyver about the reach of a
18 discharge mechanism as a reason for combining McGyver
19 with Waldner?

20 A. No, that -- using McGyver's teachings in that
21 way would not change the reach. Still be limited by
22 the frame of 50, or, yeah, the elevated simply 50.

23 Q. And in your opinion that a POSITA would have
24 been motivated to combine the teaches of McGyver with
25 those of Waldner, did you rely on any teaching in

1 McGyver that would improve the delivery and discharge
2 of particulate matter?

3 MS. FLANNERY: Object to form.

4 A. Did I rely on that, no. It does, but I
5 didn't rely on that.

6 Q. (BY MR. NYDEGGER) And did you rely on any
7 teachings in McGyver about controlling the speed of a
8 conveyor in rendering your opinion that a POSITA would
9 have been motivated to combine the teachings of McGyver
10 with those of Waldner?

11 A. No.

12 Q. And did you rely on any teachings in McGyver
13 about controlling discharge rates a conveyor system as
14 a basis for why a POSITA would have combined the
15 teachings of McGyver with the teachings of Waldner?

16 A. No.

17 Q. In paragraph 394 of your declaration you
18 reference an "arm structure" of McGyver; have you been
19 able to find that?

20 A. Yes. I'm reading the context, but, yes.

21 Q. Certainly, go ahead. Let me know when you're
22 ready?

23 A. Sure, okay.. Okay.

24 Q. Okay. So in the second sentence of that
25 paragraph 394 you write "McGyver further discloses the

1 actuator 202 being connected to and applying a force
2 between the ends of the rocker arm 204, and that rocker
3 arm is articulated between opposite first and second
4 ends of the arm structure;" do you see that?

5 A. Yes, sir.

6 Q. Could you take that red marker please and
7 just -- just color in what you're referring to as the
8 arm structure at the end of that sentence.

9 A. On what document, on 1011 or on my
10 declaration or?

11 Q. Let's do it on the McGyver records itself?

12 A. Okay. Sure.

13 Q. And which figure are you...

14 A. Figure 2.

15 Q. Figure 2. Okay. Thank you.

16 A. So the arm structure comprised that members
17 214 -- I'm sorry, yeah, well, the pivot point 214, 204
18 and 206.

19 Q. Okay. So when you refer to the arm structure
20 is it correct that you are referring to a structure
21 that comprises the part 206 and the part 204 shown in
22 Figure 2 of McGyver?

23 MS. FLANNERY: Object to form.

24 A. Yes, it comprises that.

25 Q. (BY MR. NYDEGGER) Okay. Okay.

1 MR. NYDEGGER: Can we take a break for
2 a few minutes?

3 THE WITNESS: Sure.

4 MS. FLANNERY: Sure.

5 THE REPORTER: Going off the record at
6 1:54 p.m.

7 (Off the record.)

8 THE REPORTER: Going back on the
9 record at 2:03 p.m.

10 MR. NYDEGGER: Okay. Thank you.

11 Q. (BY MR. NYDEGGER:) Dr. Durham, I believe you
12 mentioned that you testified in a number of matters as
13 an expert witness, correct?

14 A. I don't know if I did or not, but that's a
15 factual statement.

16 Q. You don't know if you have testified?

17 A. I don't if I testified to that earlier today,
18 but it's a factual testified I have testified.

19 Q. Oh, okay. Fair enough. Thank you. Have you
20 served as an expert witness in any patent matters?

21 A. Yes, sir.

22 Q. How many?

23 A. 20 to 30.

24 Q. Did any of those patent matters involve
25 conveyor system?

1 A. As we discussed earlier today, yes. One of
2 the IPRs did have discuss conveyor structures in
3 regards to dust control.

4 Q. Okay.

5 A. As we talked about earlier.

6 Q. Okay. Any others that come to mind?

7 A. No, sir. That I can't remember all 30 of the
8 top, or 25 or however many off the top of my head right
9 now, but that's the one that comes to mind for sure.

10 Q. Okay.

11 A. I couldn't give you the name of the patent.

12 Q. Just speaking generally, can you provide me
13 with an understanding of the areas of technology in
14 which you've served as an expert witness in patent
15 matters?

16 A. Certainly, certainly several with regard to
17 fracturing systems and fracturing equipment, fracturing
18 methods, some drilling. Will -- did you say related --
19 I'm sorry, could you rephrase the question so I make
20 sure I answer it properly.

21 Q. Yes, I'm just asking for a general
22 understanding of the technological areas --

23 A. Okay.

24 Q. -- Involved in the patent related matters for
25 which you have served as an expert witness?

1 A. Yeah, those that I've actually filed
2 testimony on, I think, they are all oil and gas
3 applications, drilling, production, completion, yes.
4 For a dozen matters, yes.

5 Q. Okay. Dr. Durham can you describe for me the
6 various characteristics of aggregate materials that
7 would be critical consider when designing and operating
8 a conveyor system for such aggregate materials?

9 A. I can give you some, probably not an
10 exhaustive list, but certainly the density of the
11 material itself. The sharpness, if you will or the
12 roughness would be a better term. Roughness of the
13 material and how it would slide on a chute or be
14 distributed by a conveyor.

15 The dust level, how much dust refines that
16 can be carried on the air would be an important
17 consideration. Whether the material's wet or dry, at
18 least those. That's a fairly decent list.

19 Q. Okay.

20 A. There's probably some other things too.

21 Q. Okay. Let's take the issue of moisture
22 content, how would that affect the design of a conveyor
23 system?

24 A. Oh, it affects it greatly because it affects
25 the stickiness of the material and how well it would

1 stick to or if you have like a belt conveyor system you
2 want more sticky material that would affect the design
3 of your belt and how it would grab the material.

4 Wetter material tends to be stickier, if you
5 will. Stick your hand in -- stick your hand in wet
6 sand or stick your hand in dry sand, which sticks to
7 your hand more, concept. That also affects it for like
8 an air conveyor system because it's a negative in that
9 case because you're trying to blow the material through
10 the tubes and so that affects, that moisture content
11 affects that as well. It also affects the density. A
12 wetter material tends to be more dense than dry
13 material.

14 Q. Okay.

15 A. Tends to be.

16 I just thought of one more, it also affects
17 dust. Less likely to create dust of the white
18 material.

19 Q. That makes sense. But the system as taught
20 in Waldner need to be altered to be used with cement?

21 A. It may need to be, it may not need to be.

22 The description of Waldner could be used with
23 cement, for sure. I think without a significant
24 modifications. It would just be in the optimization of
25 the belt material and those kind of things.

1 Q. So you mention that if you were using cement
2 as opposed to -- let's just take the example of frack
3 sand.

4 A. Okay.

5 Q. What changes would, if any, would need be
6 made in Waldner to -- when comparing Waldner designed
7 for frack sand as compared to Waldner designed for
8 cement?

9 A. Some optimization things as well. I assume
10 you're talking about dry cement because that's what an
11 aggregate handling?

12 Q. Yes.

13 A. Yes, dry cement. There's some optimization
14 of things. Maybe you choose a different belt material.
15 Maybe you choose a different slide material, but you
16 may not as well because their characteristics are
17 similar, it's just the chunks in, you said cement not
18 concrete so probably not much. Maybe some optimization
19 things, but not much.

20 Q. So belt material, slide material, can you
21 think of anything else?

22 A. Yeah. No, they flow very similar, if you're
23 just talking about cement. Particle size is a little
24 bit bigger than cement probably, but not significant
25 not like concrete which has large chunks of gravel in

1 it.

2 Q. I believe that's all that I have for today.

3 MR. NYDEGGER: Liz, I do want to the
4 leave the deposition open just because we didn't
5 receive his expert testimony prior to today. And I'd
6 like to get that, get an updated CV that does have his
7 list of expert testimony list in the last four years
8 and have a chance to review that. I don't expect that
9 we'll want to come back, but I do want to leave that
10 option open just in case we find something new that we
11 need to explore.

12 MS. FLANNERY: Okay. So I know we
13 talked about the issue at least the statement in his
14 declaration. I just want to make clear, are you all
15 taking the position that you're entitled to that
16 information as part of the IPR discovery?

17 MR. NYDEGGER: Well, I think that --
18 yeah, I think that he's required to provide his
19 qualifications and his background I believe that his
20 testimony in the last four years is a part of that, and
21 maybe I'm thinking of the federal rules instead of the
22 IPR rules.

23 MS. FLANNERY: That's where I'm having
24 trouble. I just want to make sure I understand your
25 position on that. I mean, look if we can get a copy of

1 that sitting here today I prefer not to have to leave
2 things opens. It's not typical practice for me in
3 IPRs, that's something we can potentially resolve that
4 way.

5 MR. NYDEGGER: I don't know that I'm
6 going to be able to have time to, you know, discern
7 from a list without going and pulling up the matters
8 and seeing what was actually an issue in those matters.

9 MS. FLANNERY: Okay. I mean, you can
10 -- you've stated your position on the record.

11 MR. NYDEGGER: Sure.

12 MS. FLANNERY: I think our position
13 would be if you guys had told us about this before, we
14 could have provided it before the deposition.

15 So to the extent that you guys think
16 you have the right to ask for it, I think we may have
17 to just agree to disagree clear it on the record. I
18 don't need to fight with you about it right now. I
19 don't want to. I just want to make it clear.

20 MR. NYDEGGER: Yeah, I don't think
21 we'll -- like I said, I don't know that we'll need to
22 and if we do I think I would just prefer to do that by
23 video.

24 MS. FLANNERY: Okay. And we can talk
25 about that --

1 MR. NYDEGGER: -- all right. We have
2 to cross that bridge when we get to it.

3 MS. FLANNERY: Okay. If we have to
4 cross that bridge when we get to it. Okay.

5 I do have a couple of questions so if
6 you pass the witness?

7 MR. NYDEGGER: Yes.

8 MS. FLANNERY: Okay.

9 CROSS-EXAMINATION

10 BY MS. FLANNERY:

11 Q. Dr. Durham, just a couple of questions.

12 I'll start with your declaration and I think
13 you already have it open actually to paragraph 394, are
14 you there?

15 A. Yes.

16 Q. And just to orient you, I believe this is the
17 section where you talk about the disclosure of McGyver,
18 the McGyver reference; you recall that?

19 A. Yes, ma'am. Yes, ma'am.

20 Q. Okay. And limitation 13L where you're
21 talking about, that you're talking about in this
22 paragraph is the at least one lift arm structure
23 mounted on the base frame and the deployable frame?

24 A. Yes.

25 Q. I paraphrased a little but, and then the rest

1 of that limitation says "and forming a linkage between
2 the base frame and the deployable frame;" do you see?

3 A. Yes, ma'am.

4 Q. So going to paragraph 394, can you just
5 re-read that first sentence there in paragraph 394?

6 A. Into the record?

7 Q. Yes, please.

8 A. "A POSITA would have understood that the
9 rocker arm tool for arm 206 and flipper mechanism 210
10 forming linkage between the trailer 102 and the silo
11 100."

12 Q. So in terms of the elements that form a
13 linkage as is called foreign element 13L, does this
14 system -- this sentence -- excuse me, reflect your
15 testimony on that?

16 A. Yes.

17 MR. NYDEGGER: Objection, leading.

18 Q. (BY MS. FLANNERY:) Can you tell us which
19 elements form the linkage in your reading?

20 A. Sure. The linkage?

21 Q. Yes.

22 A. Is the rocker arm 204, the arm 206 and
23 flipper mechanism 210.

24 Q. All right. I'm also going to ask you about
25 Waldner. If you could find the, I believe it's Exhibit

1 1004.

2 A. Okay. I've got that.

3 Q. Okay. And do you recall when Patent
4 attorneys counsel asked you about the transition points
5 in the discharge chute member in Waldner; do you recall
6 that?

7 A. Yes.

8 Q. Okay. And if you can turn with me to Column
9 25 of Waldner sort of around line 7, just let me know
10 when you're there?

11 A. Okay. Yes, I remember reading this.

12 Q. Okay. And in the description of the
13 discharge chute member, how many components are there
14 of the discharge chute member in Waldner?

15 A. Well, it's telescopically adjustable so a
16 plurality. At least two, I guess. At least two.

17 Q. And what are the at least two sections you're
18 referring to?

19 A. A proximal Section 244 and the distal Section
20 246.

21 Q. And how are those -- how are those assembled
22 together?

23 A. They telescope, one fits inside the other and
24 telescopes out.

25 Q. When they are telescoped out, is there a

1 transition point somewhere in that structure?

2 A. Yes, there would be between the distal -- the
3 proximal Section 244 and the distal Section 246, there
4 would be a transition point, yes.

5 Q. Okay. That's all the questions I have.

6 MS. FLANNERY: Pass the witness.

7 MR. NYDEGGER: Just one quick follow
8 up for me then.

9 REDIRECT EXAMINATION

10 BY MR. NYDEGGER:

11 Q. With regard to that telescoping chute in
12 Waldner that you just discussed those transition points
13 within the chute are all entirely contained because the
14 chute is tubular, correct?

15 A. Yes.

16 Q. And so none of those transition points would
17 be a transition point that would raise any concerns for
18 dust generation, correct?

19 A. Correct.

20 MR. NYDEGGER: No further questions.

21 A. As we discussed earlier, yeah.

22 MS. FLANNERY: Nothing further here.

23 THE REPORTER: Off the record at
24 2:16 p.m. You did want a copy.

25 MS. FLANNERY: I know my paralegal

1 submitted the order.

2 THE REPORTER: That's right.

3 (Proceedings concluded.)

4 THE REPORTER: Back on the record at

5 2:21 p.m.

6 MR. NYDEGGER: So Counsel have agreed

7 to mark the Exhibit 1011 containing Dr. Durham's

8 drawings on Figure 2 as Exhibit 2001. And the Figures

9 6 and 7 of Exhibit 1004 will be marked as Exhibit 2002.

10 MS. FLANNERY: No objection here.

11 MR. NYDEGGER: Okay.

12 THE REPORTER: Off the record at

13 2:32 p.m.

14 (Proceedings concluded.)

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

VS.

MASABA, INC.,
Patent Owner.

MARCH 26, 2025

_____ was requested by the deponent or a party before the completion of the deposition returned within 30 days from date of receipt of the transcript.

1 If returned, the attached Changes and Signature Page
2 contains any changes and the reasons therefor;

3 X was not requested by the deponent or a
4 party before the completion of the deposition.

5 I further certify that I am neither attorney
6 nor counsel for, related to, nor employed by any of the
7 parties to the action in which this testimony was
8 taken.

9 Further, I am not a relative or employee of
10 any attorney of record in this case, nor do I have a
11 financial interest in the action.

12 Subscribed and sworn to on this the 1st day
13 of April, 2025.



14
15 NILDA CODINA
16 Notary in and
17 For the State of Texas
My Commission No. 12878135-3
Expires: 10/24/2027

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CERTIFICATE OF DEPONENT

I hereby certify that I have read the foregoing pages of my deposition testimony in this proceeding, and with the exception of changes and/or corrections, if any, find them to be a true and correct transcription thereof.

Deponent

Date

NOTARY PUBLIC

Subscribed and sworn to before me this

_____ day of _____, 20__.

Notary Republic

My Commission Expires:_____

1 INSTRUCTIONS TO WITNESS

2

3 Please read your deposition over carefully
4 and make any necessary corrections. You
5 should state the reason in the appropriate
6 space on the errata sheet for any corrections
7 that are made.

8 After doing so, please sign the errata
9 sheet and date it.

10 You are signing same subject to the changes
11 you have noted on the errata sheet, which
12 will be attached to your deposition.

13 It is imperative that you return the
14 original errata sheet to the deposing
15 attorney within thirty (30) days of
16 receipt of the deposition transcript by
17 you. If you fail to do so, the deposition
18 transcript may be deemed to be accurate
19 and may be used in court.

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