

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HALLIBURTON ENERGY SERVICES, INC., AND
CIMAREX ENERGY, CO.

Petitioner,

v.

U.S. WELL SERVICES, LLC,
Patent Owner.

IPR2021-01038
Patent 10,408,030 B2

Before MEREDITH C. PETRAVICK, LYNNE H. BROWNE, and
SEAN P. O'HANLON, *Administrative Patent Judges*.

BROWNE, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Petitioner, Halliburton Energy Services and Cimarex Energy, Co., filed a Petition (Paper 3, “Pet.”) requesting *inter partes* review of claims 1–14 of U.S. Patent No. 10,408,030 B2 (Ex. 1002, “the ’030 patent”). Patent Owner, U.S. Wells Services, LLC, filed a Preliminary Response (Paper 7, “Prelim. Resp.”). With our authorization, Petitioner filed a Preliminary Reply to Patent Owner’s Preliminary Response (Paper 8, “Prelim. Reply”) and Patent Owner filed a Preliminary Sur-reply (Paper 10, “Prelim. Sur-reply”).

Under 35 U.S.C. § 314(a), an *inter partes* review may not be instituted unless the information presented in the Petition and any response thereto shows “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” Considering the Petition, the arguments presented in the Preliminary Response, as well as all supporting evidence, we determine that Petitioner shows a reasonable likelihood that at least one of the challenged claims is unpatentable.

Accordingly, we institute *inter partes* review.

A. *Real Parties in Interest*

Petitioner states that it, “Halliburton Co., Halliburton Holdings, LLC, Key Production Company Inc., Cimarex Energy Co. of Colorado, Magnum Hunter Production Inc., Prize Energy Resources Inc., Cimarex Resolute LLC, Resolute Natural Resources Company, LLC, and Resolute Natural Resources Southwest, LLC are the real parties in interest.” Pet. 1. Patent Owner states that it, USWS Holdings, LLC, and U.S. Well Services, Inc. are the real parties in interest. Paper 5, 1.

B. Related Matters

The parties state that the '030 patent is currently being asserted in *U.S. Well Services, Inc. v. Halliburton Company*, Case No. 6:21-cv-00367 (W.D. Tex.). Pet. 1; Paper 5, 1.

The parties state that Petitioner filed petitions for *inter partes* review against other patents held by Patent Owner, including: IPR2021-01032 against U.S. Patent No. 9,410,410 (“the '410 patent”); IPR2021-01033 against U.S. Pat. No. 9,789,601; IPR2021-01034 against U.S. Pat. No. 10,337,308; IPR2021-01035 against U.S. Pat. No. 9,970,278; IPR2021-01036 against U.S. Pat. No. 9,611,728; IPR2021-01037 against U.S. Pat. No. 9,745,840; IPR2021-01065 against U.S. Pat. No. 9,840,901; and IPR2021-01066 against U.S. Patent No. 10,020,711. Pet. 1; Paper 5, 1.

C. The '030 Patent

The '030 patent titled “Electric Powered Pump Down” issued September 10, 2019. Ex. 1002, codes (45), (54). It “relates to a system that uses fluid pressurized by electrically powered pumps for fracturing and for pump down operations.” *Id.* at 1:24–26. Figure 1A of the '030 patent is reproduced below.

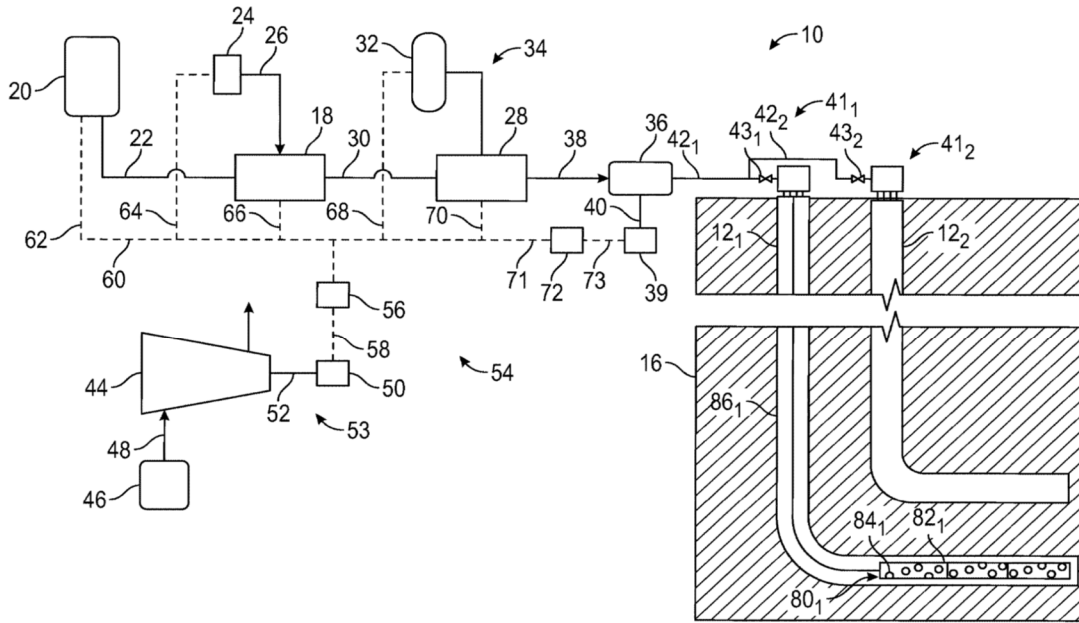


FIG. 1A

Figure 1A shows a schematic of system 10 that provides pressurized fluid to wellbores. *Id.* at 3:65–66. As shown in Figure 1A, system 10 includes fluid source 20 (represented by a large chamfered rectangle) in the upper left corner of the figure. *Id.* at Fig. 1A, 4:4. To the right of fluid source 20 is additive source 24 (represented by a small rectangle). *Id.* at Fig. 1A, 4:5–6. Below and to the right of additive source 24 is hydration unit 18 (represented by a large rectangle). *Id.* at Fig. 1A, 4:3–4. Above and to the right of hydration 18 is proppant source 32 (represented by a cylinder). *Id.* at Fig. 1A, 4:15. Below and to the right of proppant source 32 is blender unit 28 (represented by a large rectangle). *Id.* at Fig. 1A, 4:14. To the right of blender unit 28 is pump assembly 36 (represented by small chamfered rectangle). *Id.* at Fig. 1A, 4:31. To the right of fracturing pump system 36 is wellhead assembly 41₁, 41₂ (represented by a pair small rectangles) and below blender unit 28 is motor 39 (represented by a small rectangle). *Id.* at Fig. 1A, 4:30, 34. To the left of motor 39 is variable frequency drive 72

(represented by a small rectangle). *Id.* at Fig. 1A, 5:20–21. Below wellhead assembly 41 are wellbores 12₁, 12₂ (shown as vertical tunnel shafts that turn to the right near the bottom to form horizontal shafts in subterranean formation 16 (represented by a large rectangle filled with cross-hatching)). *Id.* at Fig. 1A, 4:3. Figure 1A also shows perforating string 80₁ (represented by a rectangle located inside the horizontal portion of shaft 12₁). *Id.* at Fig. 1A; 5:41–42). Perforating string 80₁ includes perforating guns 82 (represented by small circles inside perforating string 80₁) stacked in series and coaxial with one another. *Id.* at Fig. 1A, 5:43).

Shown in Figure 1A below and between hydration unit 18 and blender unit 28 is transformer 56 (represented by a small rectangle) and below it is generator 50 (also represented by a small rectangle). Ex. 1002, Fig. 1A, 4:60, 66. To the left of generator 50 is turbine 44 (represented by a truncated cone) and below it is fuel source 46 (represented by a chamfered square). *Id.* at Fig. 1A, 4:52, 54. “Electricity generated in generator 50 is conveyed to transformer 56 via line 58” (represented by a dashed line extending between generator 50 and transformer 56). *Id.* at Fig. 1A, 5:7–8. Transformer 56 is also connected to power bus 60 (represented by a dashed horizontal line extending from a point below the left half of fluid source 20 to the side of variable frequency drive 72) having lines 62, 64, 66, 68, and 70 (each of these lines is represented by a dashed vertical line extending from bus 60 as described below) connected thereto. *Id.* at Fig. 1A, 5:11–13. “[L]ine 62 connects fluid source 20 to bus 60, line 64 connects additive source 24 to bus 60, line 66 connects hydration unit 18 to bus 60, line 68 connects proppant source 32 to bus 60, line 70 connects blender unit 28 to bus 60,” and line 72 connects motor 39 to bus 60. *Id.* Fig. at 1A, 5:16–19. The portion of bus 60 extending passed line 70 is labeled 71 and line 73

(represented by a horizontal dashed line) connects variable frequency drive 72 to electric motor 39. *Id.* at Fig. 1A, 5:19–21.

In operation, hydration unit 18 receives fluid from fluid source 20 via line 22 (represented by a solid arrow extending from the bottom of fluid source 20 to the left side of hydration unit 18). Ex. 1002, Fig. 1A, 4:3–5. Hydration unit 18 also selectively receives additives from additive source 24 via line 26 (represented by a solid arrow extending from the right side of additive source 24 to the top of hydration unit 18). *Id.* at Fig. 1A, 4:5–6. The fluid and additives are transferred from hydration unit to blender unit 28 via line 30 (represented by a solid arrow extending from the right side of hydraulic unit 18 to the left side of blender unit 28) where they are mixed. *Id.* at Fig. 1A, 4:13–14. Proppant source 32 delivers proppant to blender unit 28 via line 34 (represented by a solid arrow extending from the right side of proppant source 32 to the top of blender unit 28) where the proppant is mixed with the fluid and additives to form a fracturing slurry. *Id.* at Fig. 1A, 4:15–16. The fracturing slurry is delivered to fracturing pumping system 36 via line 38 (represented by a solid arrow extending from the right side of blender unit 28 to the left side of fracturing pumping system 36). *Id.* at Fig. 1A, 4:18–20. Perforating string 80₁ is pumped down within wellbore 12₁ by pressurized fluid from pump system 36. *Id.* at Fig. 1A, 5:37–38.

D. Challenged Claims

Petitioner challenges claims 1–14. Pet. 11. Claims 1 and 10 are independent claims. Ex. 1002, 9:9–20, 10:10–20. Claims 2–9 depend from claim 1 and claims 11–14 depend from claim 10. *Id.* at 9:21–10:9, 10:21–33.

Representative claim 1 is reproduced below.

1. A method of operations in a subterranean formation, the method comprising:

driving a pump with an electrically powered motor to pressurize fluid;

inserting a tool into a wellbore that intersects the formation;

pressurizing fluid upstream of the pump to form a boost fluid;

directing the boost fluid to the pump; and

directing the pressurized fluid downstream of the pump and into the wellbore upstream of the tool to push the tool into the wellbore.

Ex. 1002, 9:9–20.

E. Asserted Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1–4, 7, 8, 10–14	103(a)	Conrad, ¹ Neal, ² Coli ³
4–6, 14	103(a)	Conrad, Neal, Coli, Tolman ⁴
9	103(a)	Conrad, Neal, Coli, Teurlay ⁵
12	103(a)	Conrad, Neal, Coli, Broussard ⁶

¹ Conrad et al., U.S. Patent No. 9,903,190 B2, issued February 27, 2018 (Ex. 1008) (“Conrad”).

² Neal, U.S. Patent No. 8,146,665 B2, issued April 3, 2012 (Ex. 1009) (“Neal”).

³ Coli et al., U.S. Patent Application Publication No. 2012/0255734 A1, published Oct. 11, 2012 (Ex. 1010) (“Coli”).

⁴ Tolman et al., U.S. Patent Application Publication No. 2009/0114392 A1, published May 7, 2009 (Ex. 1011) (“Tolman”).

⁵ Teurlay et al., U.S. Patent No. 7,900,893 B2, issued March 8, 2011 (Ex. 1012) (“Teurlay”).

⁶ Broussard et al., U.S. Patent Application No. 2014/0138079 A1, published May 22, 2014 (Ex. 1014) (“Broussard”).

Pet. 11. In addition to the references listed above, Petitioner relies on the Declaration of L. Brun Hilbert, PhD (Ex. 1005). Patent Owner submits a declaration of Mr. Robert Schaaf (Ex. 2008).

II. ANALYSIS

A. *Discretionary Denial Under 35 U.S.C. § 314(a)*

Patent Owner requests that we exercise discretion under 35 U.S.C. § 314(a) to deny institution. Prelim. Resp. 25–35. (citing, *e.g.*, *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”).

Fintiv sets forth the factors that we weigh in determining whether to exercise our discretion to deny institution of the *inter partes* review proceeding here under 35 U.S.C. § 314(a). *See Fintiv*, Paper 11 at 5–6.

These factors are:

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
2. proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision;
3. investment in the parallel proceeding by the court and the parties;
4. overlap between issues raised in the petition and in the parallel proceeding;
5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
6. other circumstances that impact the Board’s exercise of discretion, including the merits.

Id. “These factors relate to whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding.” *Id.* at 6. “[T]he Board takes a holistic view

of whether efficiency and integrity of the system are best served by denying or instituting review.” *Id.*

For the reasons discussed below, we decline to exercise our discretion to deny institution under 35 U.S.C. § 314(a).

1. Whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted.

Fintiv Factor 1 recognizes that a stay of litigation pending resolution of a PTAB trial allays concerns about inefficiency and duplication of efforts, which strongly weighs against exercising the authority to deny institution. *Fintiv*, Paper 11 at 6.

Patent Owner contends this factor weighs in favor of discretionary denial because Petitioner has not requested a stay of the parallel district court proceeding, nor is there any evidence of record that a later-filed request for stay would be granted. Prelim. Resp. 28.

Petitioner asserts that factor does not weigh in favor of discretionary denial because “[a]t the time of the filing of the [Patent Owner’s Preliminary Response], Judge Albright had stayed at least one case pending resolution of a related IPR, providing precedent to support a stay if the Board institutes.” Prelim. Reply. 3.

On this record, it is unclear how the judge in district court would proceed, and we decline to speculate regarding whether the district court will grant a stay if this proceeding is instituted. Accordingly, this factor is neutral.

2. Proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision.

Fintiv Factor 2 looks to the “proximity of the court’s trial date to the Board’s projected statutory deadline.” *Fintiv*, Paper 11 at 9. “If the court’s

trial date is earlier than the projected statutory deadline, the Board generally has weighed this fact in favor of exercising authority to deny institution under *NHK*.” *Id.*

Patent Owner contends this factor favors denial because the parallel district court proceeding will conclude before a final written decision is issued in the present proceeding (if instituted), in light of the scheduled trial date of December 19, 2022, in the parallel district court proceeding. Prelim. Resp. 29–30. Patent Owner further contends that there is no reason to believe the trial date will be postponed. Prelim. Sur-reply 3.

In its Preliminary Reply, Petitioner contends that the scheduled trial date is only one month earlier than the projected deadline for a final written decision, and an “early trial date” is “non-dispositive” and simply means that “the decision whether to institute will likely implicate other factors.” Prelim. Reply 1–2 (citing *Fintiv*, Paper 11 at 5, 8–9). Petitioner further contends that recent data shows that district court trial dates are often delayed by several months and that the uncertainty of the trial date combined with the close proximity of the current trial date to the projected final written decision deadline weigh against discretionary denial. *Id.* at 2 (citing Ex. 1019; Ex. 1020).

Given the statutory deadlines, our latest possible date for issuance of a final written decision in this proceeding is January 19, 2023, one year from institution of this proceeding.⁷ 35 U.S.C. §§ 314(b) (2018), 316(a)(11); *see also* 37 C.F.R. § 42.100(c). Thus, the time period from the district court’s default trial date to our projected statutory deadline for a final written

⁷ “The time can be extended by up to six months for good cause by the Chief Administrative Patent Judge, or adjusted by the Board in the case of joinder.” 37 C.F.R. § 42.100(c).

decision is approximately one month. In general, if the district court's trial date is earlier than our projected statutory deadline for a final written decision, the Board usually has weighed this fact in favor of exercising authority to deny institution under *NHK*. *Fintiv*, Paper 11 at 9. Where the trial date and the projected date of our final written decision are at or around the same time, however, as they are here, the efficiency and fairness concerns that underlie the *Fintiv* analysis are not as strong, and the decision whether to institute will instead implicate other factors. *See Fintiv*, Paper 11 at 9 ("If the court's trial date is at or around the same time as the projected statutory deadline, . . . the decision whether to institute will likely implicate other factors discussed herein, such as the resources that have been invested in the parallel proceeding.").

Further, the "Agreed Scheduling Order" states that the trial date is "TBD by the Court (default date under [Standing Order Governing Proceedings] is December 19, 2022)" and "[52 weeks after *Markman* hearing (12/20/21)]." Ex. 2005, 5. This indicates that the December 19, 2022, is a default date that was calculated as being 52 weeks after the *Markman* hearing, then scheduled for December 20, 2021. *Id.* We note, however, that the *Markman* hearing has since been rescheduled to occur on January 4, 2022. Ex. 1053.

Under these circumstances and especially the closeness of the trial date and projected final written decision deadline, we find that this factor is neutral.

3. *Investment in the parallel proceeding by the court and the parties.*

Fintiv Factor 3 considers the "investment in the parallel proceeding by the court and parties," including "the amount and type of work already

completed in the parallel litigation by the court and the parties at the time of the institution decision.” *Fintiv*, Paper 11 at 9.

Patent Owner contends this factor favors denial because instituting the Petition would waste the investment made by the parties and the district court in the parallel district court proceeding. Prelim. Resp. 30. Petitioner contends this factor favors institution because, at the time of the Petition, discovery had not commenced in the parallel district court proceeding, and Patent Owner had not served infringement contentions. Pet. 12. In its Preliminary Reply, Petitioner further contends that “very limited discovery only related to claim construction” is permitted until a claim construction hearing is complete, and “it is unclear whether the parties will have received a claim construction order by the time an institution decision is due.” Prelim. Reply 2.

Fintiv states that, “[i]f, at the time of the institution decision, the district court has not issued orders related to the patent at issue in the petition, this fact weighs against exercising discretion to deny institution.” *Fintiv*, Paper 11 at 10. Here, although some exchanges have taken place and some of the issues will have been briefed prior to institution, the district court has not issued any substantive orders addressing claim construction, validity, or infringement of the ’030 patent. Accordingly, this factor weighs strongly against exercising our discretion to deny institution.

4. *Overlap between issues raised in the petition and in the parallel proceeding.*

Fintiv Factor 4 considers whether “the petition includes the same or substantially the same claims, grounds, arguments, and evidence as presented in the parallel proceeding.” *Fintiv*, Paper 11 at 12. If the issues in the Petition overlap substantially with those raised in the parallel proceeding,

“this fact has favored denial.” *Id.* “Conversely, if the petition includes materially different grounds, arguments, and/or evidence . . . this fact has tended to weigh against exercising discretion to deny institution.” *Id.* at 12–13.

Concerns about the degree of overlap may be mitigated where a petitioner agrees not to pursue in the parallel district court litigation the grounds advanced in the petition. *Sand Revolution II, LLC v. Continental Intermodal Grp. – Trucking LLC*, IPR2019-01393, Paper 24 at 11–12, 12 n.5 (PTAB June 16, 2020) (informative). A petitioner stipulating not to pursue “any ground raised or that could have been reasonably raised” weighs strongly in favor of not exercising discretionary denial. *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 at 18–19 (PTAB Dec. 1, 2020) (precedential as to § II.A) (“*Sotera*”).

Patent Owner contends this factor favors denial because Petitioner’s challenges to the ’030 patent are substantially the same as the invalidity challenges presented in the parallel district court proceeding as Petitioner relies on substantially the same invalidity arguments and the same references. Prelim. Resp. 31.

In its Preliminary Reply, Petitioner submits that this factor weighs against the Board’s discretion to deny because there is no overlap between the claims at issue in the Petition and the parallel proceeding. Prelim. Reply 1. To mitigate concerns of overlap, Petitioner also stipulates that it “will not pursue the same invalidity grounds in the district court proceeding as those asserted in the corresponding IPR petition” if the Board institutes an *inter partes* review. *Id.* Patent Owner contends that if the Board credits the stipulation, “the stipulation should weigh only ‘marginally’ against discretionary denial because it is not as encompassing as the stipulation in

Sotera.” Prelim. Sur-reply 2 (citing *Verizon Bus. Network Svs., LLC v. Huawei Tech. Co.*, IPR2020-01278, Paper 12, 13 (PTAB Jan. 26, 2021)).

Petitioner’s stipulation is narrow, not a broad stipulation that includes “any ground raised, or that *could have been reasonably raised.*” *See Sotera*, Paper 12 at 19; *see also Sand*, Paper 24 at 12 n.5 (noting that a broad stipulation better addresses concerns of duplicative efforts and potentially conflicting decisions in a much more substantial way). The stipulation does, however, mitigate the concerns of inefficiency and the possibility of conflicting decisions. Therefore, we find that this factor weighs marginally against denying institution.

5. *Whether the petitioner and the defendant in the parallel proceeding are the same party.*

Fintiv Factor 5 looks to “whether the petitioner and the defendant in the parallel proceeding are the same party.” *Fintiv*, Paper 11 at 14. “If a petitioner is unrelated to a defendant in an earlier court proceeding, the Board has weighed this fact against exercising discretion to deny institution.” *Id.* at 13–14.

Patent Owner contends this factor weighs strongly in favor of denial because Petitioner is the named defendant in the parallel district court proceeding. Here, it is undisputed that Petitioner is a defendant in the parallel litigation. Pet. 1. As noted in Section II.A.2 above, it is unclear on this record when the trial in the Texas litigation will occur and whether the trial will take place prior to a final written decision being issued in this proceeding. Thus, it is unclear on this record whether any estoppel will be implicated. *See* 35 U.S.C. § 315(e). Under these circumstances and especially given the closeness of the default trial date and the projected final written decision deadline, the facts underlying this factor are neutral.

6. *Other circumstances that impact the Board's exercise of discretion, including the merits.*

Fintiv Factor 6 looks to whether “other circumstances” exist that might “impact the Board’s exercise of discretion, including the merits.” *Fintiv*, Paper 11 at 14.

Patent Owner argues this factor favors denial because: there is a weakness in Petitioner’s merits (i.e., Petitioner has improperly relied on hindsight bias and conclusory statements to support its obviousness contentions); the Office previously considered three of the reference (i.e., Conrad, Neal, and Coli); and Petitioner has weaponized the *inter partes* review process, as evidenced by Petitioner’s filing of fourteen separate petitions challenging Patent Owner’s patents. Prelim. Resp. 33–34. Petitioner does not address this factor. *See generally* Pet.

We have reviewed the prior art references and the arguments of both Petitioner and Patent Owner. As discussed in more detail below, we find the evidence and arguments presented by Petitioner persuasive on this preliminary record and sufficient to meet our standard for instituting *inter partes* review. Accordingly, we find that factor 6 is neutral.

7. *Conclusion on Discretionary Denial under 35 U.S.C. § 314(a)*

Based on a holistic review of the *Fintiv* factors, we decline to exercise our discretion under § 314(a) to deny institution.

B. *Discretionary Denial Under 35 U.S.C. § 325(d)*

Section 325(d) provides that the Director may elect not to institute a proceeding if the challenge to the patent is based on matters previously presented to the Office. 35 U.S.C. § 325(d) states, in pertinent part, that “[i]n determining whether to institute or order a proceeding under this

chapter, chapter 30, or chapter 31, the Director may take into account whether, and reject the petition or request because, the same or substantially the same prior art or arguments previously were presented to the Office.”

The Board uses a two-part framework for evaluating arguments under § 325(d):

(1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and

(2) if either condition of first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.

Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH, IPR2019-01469, Paper 6 at 8 (PTAB Feb. 13, 2020) (precedential)

(“*Advanced Bionics*”). “[T]he *Becton, Dickinson* factors provide useful insight into how to apply the framework under 35 U.S.C. § 325(d).” *Id.* at 9 (footnote omitted). The non-exclusive *Becton, Dickinson* factors are:

(a) the similarities and material differences between the asserted art and the prior art involved during examination;

(b) the cumulative nature of the asserted art and the prior art evaluated during examination;

(c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection;

(d) the extent of the overlap between the arguments made during examination and the manner in which Petitioner relies on the prior art or Patent Owner distinguishes the prior art;

(e) whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art; and

(f) the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or arguments.

Becton, Dickinson & Co. v. B. Braun Melsungen AG, IPR2017-01586, Paper 8 at 17–18 (PTAB Dec. 15, 2017) (precedential as to § III.C.5, first paragraph) (“*Becton, Dickinson*”). *Becton, Dickinson* factors (a), (b), and (d) relate to the first part of the *Advanced Bionics* framework (whether the same or substantially the same art or arguments previously were presented to the Office), and *Becton, Dickinson* factors (c), (e), and (f) relate to the second part of that framework (previous Office error). *Advanced Bionics*, Paper 6 at 9–11. Only if the same or substantially the same art or arguments were previously presented to the Office do we then consider whether the petitioner has demonstrated a material error by the Office. *Id.*

Under § 325(d), the art or arguments must have been previously presented to the Office during proceedings, such as examination of the underlying patent application, pertaining to the challenged patent. *Advanced Bionics*, Paper 6 at 7. Previously presented art includes art made of record by the Examiner, and art provided to the Office by an applicant, such as on an Information Disclosure Statement (“IDS”), in the prosecution history of the challenged patent. *Id.* at 7–8.

Patent Owner contends that the same or substantially the same art and arguments cited by Petitioner were already considered by the Office, and Petitioner failed to show or even suggest how the Office may have erred. Prelim. Resp. 12. Specifically, Patent Owner contends that Petitioner relies on three references (Neal, Coli, and Broussard) that the Examiner previously considered. *Id.* Patent Owner contends further that the other three references relied upon (Conrad, Teurlay, and Tolman) are substantially the same and cumulative of references considered by the Examiner during examination. *Id.*

Petitioner contends that Conrad, Neal,⁸ Tolman, and Teurlay were not considered by the Patent Office during prosecution of the '030 patent and that, although Coli and Broussard were listed on the face of the '030 patent, there is no evidence of record that they were substantively considered by the Examiner. Pet. 13–14. Petitioner contends further that Conrad, Tolman, and Teurlay “are not substantively the same or similar to any prior art raised in a rejection during examination” and that Conrad and Tolman disclose the exact elements that were used to overcome the rejections made during examination. Prelim. Reply 3.

Although, Neal, Coli, and Broussard are cited on the face of the '030 patent, we find that the first part of the *Advanced Bionics* framework is not satisfied because the particular combinations (which each rely on Conrad, a reference not considered by the Examiner during prosecution, as the base reference) set forth in the Petition were not considered by the Examiner. These references were disclosed on an Information Disclosure Statement, but neither the Examiner nor Applicant substantively discussed them during prosecution. *See generally* Ex. 1004. The Examiner indicted that Neal, Coli, and Broussard were considered during prosecution of the application resulting in the '030 patent by annotating the Information Disclosure Statement. *Id.* at 89, 92, 124. Our precedent establishes that “[p]reviously presented art includes . . . art provided to the Office by an applicant, such as on an Information Disclosure Statement, in the prosecution history of the challenged patent.” *Advanced Bionics*, Paper 6 at 7–8. Thus, we agree with Patent Owner that Neal, Coli, and Broussard previously were presented to the Office.

⁸ Neal is listed on the face of the '030 patent. Ex. 1002, 2.

The Petition, however, does not assert Neal, Coli, and Broussard alone. Rather, each of these references is asserted in combination with Conrad, which, as noted above, was not presented to the Office during prosecution. Pet. 11. Although Patent Owner asserts that Conrad is cumulative of Wiermers, on the record before us, we agree with Petitioner that it is not. Prelim. Resp. 12, Prelim. Reply 3–4. We agree with Petitioner that “*Conrad* is directed to a pump down and fracturing system for pumping *both* pump down and fracturing fluid into *multiple* wellbores.” Prelim. Reply. 4 (citing Ex. 1002, 9:26–10:3, 10:30–33).⁹ We further agree with Petitioner that this is the exact aspect the Examiner deemed was missing from Wiermers during prosecution. *Id.* For these reasons, we determine that Conrad is not cumulative of Wiermers. Thus, the combination of references asserted in the Petition was not presented previously to the Office. Under the circumstances presented here, we determine that exercising discretion to deny the Petition under § 325(d) is unwarranted.

C. Level of Ordinary Skill in the Art

In determining the level of skill in the art, we consider the type of problems encountered in the art, the prior art solutions to those problems, the rapidity with which innovations are made, the sophistication of the technology, and the educational level of active workers in the field. *Custom Accessories, Inc. v. Jeffrey-Allan Indus. Inc.*, 807 F.2d 955, 962 (Fed. Cir. 1986); *Orthopedic Equip. Co. v. U.S.*, 702 F.2d 1005, 1011 (Fed. Cir. 1983).

⁹ Petitioner cites Ex. 1001, but we assume the citation was intended to be to Ex. 1002 (the ’030 patent, which is the subject of this proceeding).

Petitioner contends that a person of ordinary skill in the art at the time of the invention of the '728 patent would have had the following education and experience:

either (1) a Bachelor of Science in Mechanical Engineering, Electrical Engineering, Petroleum Engineering or an equivalent field as well as at least [two] years of academic or industry experience in the oil and gas industry, including well drilling, completion, or production; or (2) at least four years of industry experience in the oil and gas industry, including well drilling, completion, or production.

Pet. 11–12 (citing Ex. 1005 ¶¶ 29–30). Patent Owner adopts this definition of the level of skill. Prelim. Resp. 7.

For purposes of this Decision, we also adopt Petitioner’s proposal as reasonable and consistent with the prior art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (the prior art may reflect an appropriate level of skill in the art).

D. Claim Construction

For petitions filed on or after November 13, 2018, the “broadest reasonable interpretation” standard has been replaced with the federal court claim construction standard that is used to construe a claim in a civil action under 35 U.S.C. § 282(b). This is the same claim construction standard articulated in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc), and its progeny.

Neither Petitioner nor Patent Owner provide any explicit construction of any claim terms. Pet. 12, Prelim. Resp. 7. Except to the extent we explain how we interpret the claims in the analysis below, we decline to otherwise expressly construe any claim terms at this time. *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (only terms that are in controversy need to be construed, and then only to the extent

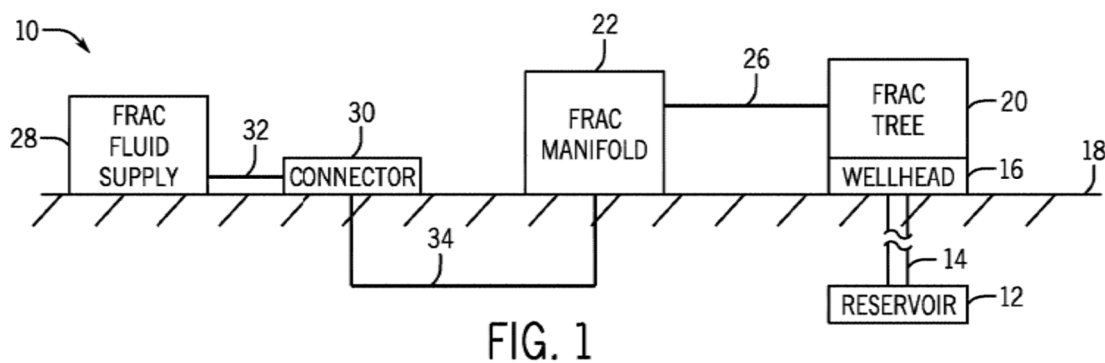
necessary to resolve the controversy), *see also* *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (citing *Vivid Techs* in the context of an *inter partes* review).

E. Overview of Certain Ones of the Asserted Prior art¹⁰

1. Conrad

Conrad is a U.S. Patent titled, “Modular Fracturing System,” published February 27, 2018. Ex. 1008, codes (45), (54).

Conrad describes a fracturing system that facilitates extraction of natural resources such as oil or natural gas from a reservoir. Ex. 1008, 3:7–9. Figure 1, reproduced below, shows Conrad’s system:



Id. Fig. 1. As shown in Figure 1 fracturing system 10 (depicted as a block diagram) includes fracturing tree 20 (represented by the upper approximately two thirds of a bifurcated rectangle on the left side of Fig. 1) and fracturing manifold system 22 (represented by a rectangle to the left of fracturing tree 20). *Id.* Fig. 1, 3:21–22. Wellhead 16 is depicted as approximately the bottom third of the bifurcated rectangle encompassing fracturing tree 20. *Id.*

¹⁰ In the interest of brevity, we limit our discussion of the prior art to the three references (Conrad, Neal, and Coli) argued by Patent Owner in its Preliminary Response.

Fig. 1. Directly below wellhead 16 is well 14 (depicted as a split channel) leading to reservoir 12 (depicted by a rectangle approximately the same size the rectangle representing wellhead 16). *Id.* To the left of fracturing manifold 22 is connector 30 (also represented by a rectangle approximately the same size as the rectangle representing wellhead 16) and to the left of connector 30 is fracturing fluid supply 28 (represented by a rectangle). *Id.* All of the components of fracturing system 10 except for well 14 and reservoir 12 are shown as resting on ground 18 (depicted as a horizontal line with hash marks extending from right to left below the line). *Id.*

Figure 1 also shows fluid connection (i.e. pipe) 26 depicted as a line extending between the left side of fracturing tree 20 and fracturing manifold 22, fluid connection 34 depicted as a vertical line extending from the bottom of fracturing manifold 22 into ground 18 where it turns right to become a horizontal line extending to a point below connector 30 where it turns up to become a vertical line extending to the bottom of connector 30, and fluid connection 32 extending from the left side of connector 30 to the right side of fracturing fluid supply 28. *Id.* Describes injecting fracturing fluid down to well 14 in order to increase the number and size of fractures in a formation. *Id.* 3:10–13. Conrad describes a further embodiment that includes additional manifold 90 which is “a pump-down manifold for routing fluid to wellhead assemblies 50 to pump a downhole tool (e.g., a wireline tool having a plug or a perforating gun) down the well.” *Id.* at 5:32–36.

2. Neal

Neal is a U.S. Patent titled, “Apparatus and Method for Maintaining Boost Pressure to High-Pressure Pumps During Wellbore Servicing Operations,” published April 3, 2012. Ex. 1009, codes (45), (54).

Neal describes “a wellbore services manifold trailer and a method of using the same to maintain boost pressure to high-pressure pumps.” Ex. 1009, 1:23–25. Neal utilizes high-pressure pumps to increase fluid pressure to a high-pressure suitable for injection into a wellbore. *Id.* at 5:14–16. Neal also describes the use of boost pumps to provide sufficient pressure for the high pressure pumps. *Id.* at 9:20–23.

3. *Coli*

Coli is a U.S. Patent Application Publication titled, “Mobile, Modular, Electrically Powered System for Use in Fracturing Underground Formations,” published on October 11, 2012. Ex. 1010, codes (45), (54).

Coli describes an electrically powered fracturing system and a system and method for providing on-site electrical power and delivering fracturing fluid to a wellbore at a fracturing operation. Ex. 1008 ¶ 34. *Coli* further describes that natural gas (either supplied to the site or produced on-site) is used to drive a dedicated source of electrical power, such as a turbine generator, for hydrocarbon-producing wellborn completions. *Id.* ¶ 36.

Coli’s Figure 3 is reproduced below.

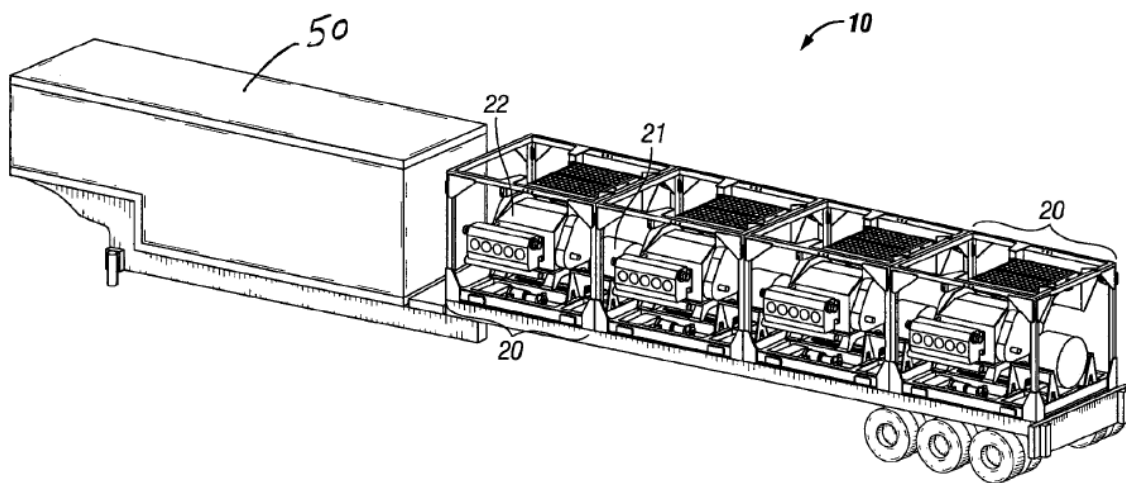


FIG. 3

Ex. 1008, Fig. 3. Figure 3 depicts a schematic perspective view of a fracturing trailer 10 for housing fracturing modules 20 along with a transformer and driver unit 50. *Id.* ¶¶ 24, 40, 49. Each fracturing module 20 includes an electric motor 21 and a fluid pump 22 coupled thereto. *Id.* ¶ 40. “Fracturing modules 20 utilize electric power from turbine generator 30 (not shown) to pump fracturing fluid directly to a wellbore.” *Id.* Coli further describes that the system can deliver 2500 horsepower (“hp”) directly to each pump because pump 22 is directly coupled to electric motor 21. *Id.* ¶ 49. Coli additionally describes that each fracturing module 20 weights approximately 28,000 pounds (“lbs.”), which allows for placement of four pumps 22 in the same physical dimension (*i.e.*, size and weight) as the spacing needed for a simple pump in conventional diesel systems, as well as allowing for up to 10,000 hp total to the pumps. *Id.*

F. Obviousness under 35 U.S.C. § 103

Petitioner contends that claims 1–14 are unpatentable over combinations of Conrad, Neal, Coli, Tolman, Teurlay, and Broussard. Pet. 14–69. Patent Owner disputes Petitioner’s contentions. Prelim. Resp. 35–60. Noting that Petitioner’s challenges for all grounds rely on the combined teachings of Conrad, Neal, and Coli to meet the limitations pertaining directing pressurized fluid into the wellbore above the tool to push the tool into the wellbore, Patent Owner addresses all of the claims and grounds together. *Id.*

1. Principles of Law

A petition must show how the construed claims are unpatentable under the statutory grounds it identifies. 37 C.F.R. § 42.104(b)(4). Petitioner bears the burden of demonstrating a reasonable likelihood that it

would prevail with respect to at least one challenged claim for a petition to be granted. 35 U.S.C. § 314(a).

A claim is unpatentable under § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) when in evidence, objective indicia of non-obviousness (i.e., secondary considerations). *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). Secondary considerations may include longfelt but unsolved need, failure of others, unexpected results, commercial success, copying, licensing, and praise. *See Graham*, 383 U.S. at 17–18; *Leapfrog Enters., Inc. v. Fisher–Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007). We analyze the asserted grounds with these principles in mind.

2. *Ground 1: Alleged Obviousness of Claims 1-4, 7, 8, and 10–14 over Conrad, Neal, and Coli*

Petitioner asserts that Conrad, Neal, and Coli render obvious claims 1–4, 7, 8, and 10–14. Pet. 1–50.

a) *Independent Claims 1 and 10*

Petitioner's assertions regarding how the prior art meets claim 10 is similar to its assertions for claim 1. *Compare* Pet. 26–31, *with id.* at 37–42. Patent Owner presents one set of arguments for all claims and grounds. Prelim. Resp. 35–44. Given Patent Owner's approach, we select claim 1 as representative of the independent claims and focus our discussion on it.

The preamble to claim 1 recites “[a] method of operations in a subterranean formation, the method comprising.” Ex. 1002, 9:9–10. Regarding the preamble, Petitioner contends that Conrad discloses a fracturing system for facilitating extraction of natural resources from a reservoir via a well and wellhead. Pet. 26 (quoting Ex. 1008, 3:7–8). Patent Owner does not dispute Petitioner’s contention. Prelim. Resp. 35–44.

The first limitation of claim 1 recites “driving a pump with an electrically powered motor to pressurize fluid.” Ex. 1002, 9:11–12. Petitioner contends that “*Neal* discloses a ‘high-pressure pump 142 [that] may increase the fluid’s pressure to a high-pressure suitable for injection into the wellbore’” and that “*Coli* discloses ‘an electrically powered motor’ that can be used to drive a pump.” Pet. 26 (quoting Ex. 1009, 5:14–16; Ex. 1005 ¶ 96).

Acknowledging that “*Conrad* does not disclose specifics regarding the pumping system used [with its manifolds] . . . for its respective pump down and fracturing operations,” Petitioner asserts that a person of ordinary skill in the art “would have understood the need for pumping systems to provide pressurized fluid to implement the dual well operations (pump down and fracturing) taught by *Conrad*.” Pet. 17–18 (citing Ex. 1005 ¶ 79). Petitioner asserts further that “[t]he use of pumps to provide pressurized fluid at well sites, including hydraulic fracturing sites, was well known in the art at the time the ’030 Patent was filed” and that a person of ordinary skill in the art “would have been motivated to look specifically to *Neal* because *Neal* discloses high-pressure pumps that are generally applicable to ‘many phases of wellbore servicing operations,’ specifically including ‘fracturing operations.’” *Id.* at 18 (quoting Ex. 1009, 1:26–27, 3:44–47). Thus, according to Petitioner, a person of ordinary skill in the art “would have

recognized that *Neal*'s high-pressure pumps are well-suited for both fracturing and pump down operations" because "*Neal* discloses techniques to prevent 'excessive wear and damage to pump components,' which is desirable in any wellbore servicing operation, including both the fracturing operation and the pump down operation disclosed by *Conrad*." *Id.* (citing Ex. 1005 ¶ 80; quoting Ex. 1009, 1:30–33).

Patent Owner contends that a person of ordinary skill in the art would not have been motivated to combine *Neal*'s high pressure pumps with *Conrad*'s lower pressure pump down operations. Prelim. Resp. 39. According to Patent Owner, "Petitioners [] fail to recognize potential safety and operational issues with respect to the combination of high pressure pumps and lower pressure pump down operations." *Id.* at 40 (citing Ex. 2008, 29). Patent Owner contends further that Petitioner's assertions that a person of ordinary skill in the art would look to *Neal* because its high pressure pumps are used for multiple wellbore servicing operations is too conclusory to support a motivation to combine rational and that "Petitioners fail to explain *why* a POSITA would look to the high pressure pumps of *Neal* regarding fracturing specifically for use in lower pressure pump down operations in view of potential safety and operational issues with such combination." *Id.* at 40 (citing Ex. 2008, 29).

As discussed above, Petitioner reasons that a person of ordinary skill in the art would look to *Neal*'s pumps because *Neal* discloses techniques to prevent excessive wear and damage to pump components. Pet. 18. Petitioner articulates further reasoning in support of the proposed modification on pages 22–23 of the Petition explaining that "[t]he addition of *Neal* to *Conrad* is a mere application of a known technique (i.e., providing pressurized fluid using boosted high-pressure pumps of *Neal*) to a

piece of prior art (i.e., fracturing and pump-down manifolds connected to wellheads) ready for improvement” and that “[u]sing *Neal*’s multi-use, high-pressure pumping system to produce pressurized fluid for *Conrad*’s pump down and fracturing operations represents a predictable use of prior art elements according to their established functions, and thus, a POSITA would have had a reasonable expectation of success in combining these well-known prior art elements.” *Id.* (citing *KSR*, 550 U.S. 402; Ex. 1005 ¶ 87). Thus, on the record before us, we determine that Petitioner has articulated sufficient rationale in support of the proposed modification for purposes of institution.

The second limitation of claim 1 recites “inserting a tool into a wellbore that intersects the formation.” Ex. 1002, 9:13–14. Petitioner asserts that Conrad discloses routing fluid to wellhead assemblies to pump a downhole tool down the well. Pet. 27 (quoting Ex. 1008, 5:33–36). Patent Owner does not dispute Petitioner’s contentions. Prelim. Resp. 35–44.

The third limitation of claim 1 recites “pressurizing fluid upstream of the pump to form a boost fluid.” Ex. 1002, 9:15–16. Petitioner contends that Neal discloses integrating a boost pump with a wellbore services manifold trailer to provide sufficient boost pressure for the high-pressure pumps. Pet. 28 (quoting Ex. 1009, 9:20–23). Patent Owner does not dispute Petitioner’s contentions. Prelim. Resp. 35–44.

The fourth limitation of claim 1 recites “directing the boost fluid to the pump.” Ex. 1002, 9:17. For this limitation, Petitioner asserts that “*Neal* discloses that its one or more boost pumps may be used to ‘boost the inlet pressure to the high-pressure pumps.’” Pet. 29 (quoting Ex. 1009, 3:29–31). Patent Owner does not dispute Petitioner’s contentions. Prelim. Resp. 35–44.

The fifth limitation of claim 1 recites “directing the pressurized fluid downstream of the pump and into the wellbore upstream of the tool to push the tool into the wellbore.” Ex. 1002, 9:18–20. Petitioner asserts that “*Neal* teaches directing the pressurized fluid ‘downstream’ of the high-pressure pump 142 and into the wellbore” and that “*Conrad* discloses ‘directing the pressurized fluid . . . upstream of the tool to push the tool into the wellbore’ through its description of ‘routing fluid to wellhead assemblies to pump a downhole tool (e.g., a wireline tool having a plug or a perforating gun) down the wells.’” Pet. 31 (citing Ex. 1005 ¶ 193; quoting Ex. 1008, 5:32–36). Petitioner asserts that a person of ordinary skill in the art “would have understood that to pump down a tool, fluid pressure would need to be directed [above] the tool to ‘push’ the tool into the wellbore.” *Id.* (citing Ex. 1005 ¶ 107; Ex. 1015, 1:20, 2:18–19, 3:11–12, 4:5–6, 6:14–15).

Patent Owner contends that “neither *Neal* nor *Conrad* discloses directing . . . ‘pressurized fluid’ into the wellbore ‘above the tool to push the tool into the wellbore.’” Prelim. Resp. 38 (citing Ex. 2008, 24). This fact, however, is not in dispute. As discussed above, the challenge set forth in Ground 1 relies on the combined teachings of *Neal* and *Conrad* as well as common sense to meet this limitation. On the record before us and for purposes of institution, Petitioner has adequately explained how the combined teachings of *Neal* and *Conrad* meet this limitation.

In addition to contesting specific limitations of claim 1, Patent Owner contends that “Petitioner’s obviousness analysis also fails because Petitioners improperly rely on hindsight to reconstruct the claimed invention from disparate elements without ever addressing the differences between the cited references and the claimed invention.” Prelim. Resp. 42. In support, Patent Owner reiterates its arguments discussed above that Petitioner

provides no explanation of why a person of ordinary skill in the art would have combined Neal and Conrad. Prelim. Resp. 43.

Impermissible hindsight is inferred when the specific understanding or principle within the knowledge of one of ordinary skill in the art that would motivate one (with no knowledge of the claimed invention) to make the proposed combination has not been explained. *In re Rouffet*, 149 F.3d 1350, 1358 (Fed. Cir. 1998). As discussed above, Petitioner explains the rationale in support of its proposed modifications. We have reviewed Petitioner's reasoning and deem it to be sufficient for purposes of institution.

For the reasons discussed above, we find on this record that Petitioner has made a sufficient showing for purposes of institution that Conrad, Neal, and Coli disclose or suggest each limitation of claims 1 and 10.

b) Dependent Claims 2–4, 7, 8, and 10–14

We have reviewed Petitioner's contentions regarding the limitations of claims 2–4, 7, 8, and 10–14 as set forth in the Petition and determine that for purposes of institution they are adequately supported by the evidence. Pet. 31–37 and 42–50. As discussed above, Patent Owner does not present separate arguments for these claims. Thus, we find on this record that Petitioner has made a sufficient showing for purposes of institution that Conrad, Neal, and Coli disclose or suggest each limitation of claims 2–4, 7, 8, 12–15, 17, 18, and 20.

c) Secondary Considerations

Notwithstanding, what the teachings of the prior art would have suggested to one skilled in the art, objective evidence of nonobviousness (so called “secondary considerations”) may lead to a conclusion that the challenged claims would not have been obvious. *In re Piasecki*, 745 F.2d 1468, 1471–72 (Fed. Cir. 1984). Objective evidence of nonobviousness

“may often be the most probative and cogent evidence in the record” and “may often establish that an invention appearing to have been obvious in light of the prior art was not.” *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Drilling USA, Inc.*, 699 F.3d 1340, 1349 (Fed. Cir. 2012) (citing *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538 (Fed. Cir. 1983)).

“In order to accord substantial weight to secondary considerations in an obviousness analysis, ‘the evidence of secondary considerations must have a “nexus” to the claims, i.e., there must be “a legally and factually sufficient connection” between the evidence and the patented invention.’” *Fox Factory, Inc. v. SRAM, LLC*, 944 F.3d 1366, 1373 (Fed. Cir. 2019) (citing *Henny Penny Corp. v. Frymaster LLC*, 938 F.3d 1324, 1332 (Fed. Cir. 2019)). “The patentee bears the burden of showing that a nexus exists.” *WMS Gaming Inc. v. Int’l Game Tech.*, 184 F.3d 1339, 1359 (Fed. Cir. 1999). Nexus is a legally and factually sufficient connection between the objective evidence and the claimed invention, such that the objective evidence should be considered in determining nonobviousness. *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1392 (Fed. Cir. 1988). A nexus is presumed when “the patentee shows that the asserted objective evidence is tied to a specific product and that product ‘embodies the claimed features, and is coextensive with them.’” *Fox Factory*, 944 F.3d at 1373 (quoting *Polaris Indus., Inc. v. Arctic Cat, Inc.*, 882 F.3d 1056, 1072 (Fed. Cir. 2018)). “A finding that a presumption of nexus is inappropriate does not end the inquiry into secondary considerations,” as “the patent owner is still afforded an opportunity to prove nexus by showing that the evidence of secondary considerations is the ‘direct result of the unique

characteristics of the claimed invention.” *Id.* at 1373–74 (citing *In re Huang*, 100 F.3d 135, 140 (Fed. Cir. 1996)).

Patent Owner contends that Petitioner has failed to rebut the objective evidence of non-obviousness raised during the prosecution of U.S. Patent No. 9,410,410 from which the '030 patent is a continuation. Prelim. Resp. 45. Patent Owner contends that the objective evidence: (i) corresponds to its Clean Fleet® product, which embodies the challenged claimed features and is coextensive with the challenged claims; and (ii) strongly supports the non-obviousness of the challenged claims, including: meeting a long-felt, unmet need; failure of others to meet this need; industry praise; copying of the claimed invention; and commercial success of the claimed invention. *Id.* at 46–47. Specifically, Patent Owner contends that the “claimed technology in the '030 Patent includes methods of operations using the Clean Fleet® technology, which comprise ‘driving a pump with an electric motor’ and ‘positioning a trailer having a pump driven by an electric motor.’” *Id.* at 49 (citing Ex. 1002, 9:9–, 10:11–20; Ex. 2008, 33).

Notwithstanding, whether Patent Owner is entitled to a presumption of nexus, Patent Owner contends there is a strong nexus between the claimed invention and the secondary considerations evidence. Prelim. Resp. at 50. Specifically, Patent Owner contends that there is evidence of: (i) commercial success; (ii) copying by others; (iii) widespread industry praise and recognition; and (iv) long-felt need, met by the claimed invention. *Id.* at 51–60.

Petitioner contends that Patent Owner has not demonstrated nexus to support secondary considerations. Prelim. Reply 6. Specifically, Petitioner contends that the presumption of nexus under step one of *Fox Factory* does not apply because Patent Owner has not demonstrated that its Clean Fleet®

product is coextensive with the '030 patent. *Id.* at 7. Petitioner further contends that Patent Owner cannot demonstrate nexus under step two of *Fox Factory* because: (i) Patent Owner relies largely on its declarant, yet its declarant has a significant interest in the proceeding, and its declarant's testimony has not been tested; and (ii) even taking the testimony of Patent Owner's declarant at face value, it does not demonstrate nexus because the second considerations actually results from something other than what is both claimed and novel in the claim. *Id.* at 9–10.

Patent Owner bears the burden of showing that a nexus exists. *WMS Gaming*, 184 F.3d at 1359. On this record, Patent Owner does not sufficiently demonstrate that it is entitled to a presumption of nexus. To establish nexus Patent Owner cites to arguments and evidence of objective indicia of nonobviousness submitted during prosecution of the application resulting in the '410 patent. Prelim. Resp. 45–46.

Further, inasmuch as, Patent Owner largely relies upon the declarations of Messrs. Broussard (Ex. 2009) and Schaaf (Ex. 2008) to supports its arguments of nexus, we do not find their testimony sufficient to establish nexus as it is untested at this stage of the proceeding. We also note that Mr. Broussard is Patent Owner's President and Chief Executive Officer (Ex. 2009 ¶ 2) and Mr. Schaaf relies on the Broussard Declaration (*see, e.g.*, Ex. 2008 ¶ 91). A final determination as to the veracity of Patent Owner's evidence and arguments is best reserved for trial.

d) Conclusion

For the foregoing reasons, and on the record presently before us, we determine that Petitioner has demonstrated a reasonable likelihood of

prevailing in demonstrating that claims 1–4, 7, 8, and 10–14 of the '030 patent are obvious over Conrad, Neal and Coli.

3. *Grounds 2–5*

Patent Owner does not separately contest the remaining challenges including the challenges directed to claims 5, 6, 9, and 11 which are not included in Ground 1. *See generally* Prelim. Resp. We have reviewed Petitioner's contentions regarding the limitations of claims 4–6, 9, 12, and 14 as set forth in Grounds 2–5 of the Petition and determine that for purposes of institution they are adequately supported by the evidence. Pet. 50–69. To the extent that Patent Owner's evidence in support of secondary considerations applies to these challenges, we determine it to be insufficient to establish nexus for the reasons discussed in Section II.F.2.c above. For the same reasons a final determination as to the veracity of Patent Owner's evidence and arguments as they pertain to Grounds 2–5 is best reserved for trial.

On the record before us, we determine that Petitioner has demonstrated a reasonable likelihood of prevailing in demonstrating that claims 4–6, 9, 12, and 14 of the '030 patent are obvious over the combinations of Conrad, Neal, Coli, Tolman, Teurlay, and Broussard set forth in Grounds 2–5 of the Petition.

III. CONCLUSION

After considering the evidence and arguments presented in the Petition and the Preliminary Response, we determine that Petitioner has demonstrated a reasonable likelihood of prevailing with respect to at least one of the challenged claims, and thus, we institute an *inter partes* review of all challenged claims on all presented challenges. *SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018); *PGS Geophysical AS v. Iancu*, 891 F.3d

1354, 1360 (Fed. Cir. 2018) (interpreting the statute to require “a simple yes-or-no institution choice respecting a petition, embracing all challenges included in the petition”).

At this stage of the proceeding, the Board has not made a final determination as to the patentability of any challenged claim or any underlying factual and legal issues.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 1–14 of U.S. Patent No. 10,408,030 B2 is instituted with respect to all grounds set forth in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), *inter partes* review of U.S. Patent No. 10,408,030 B2 shall commence on the entry date of this Order, and notice is hereby given of the institution of a trial.

IPR2021-01038
Patent 10,408,030 B2

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