

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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PERMIAN GLOBAL INC., AND  
MANTICORE FUELS, LLC  
Petitioners

v.

FUEL AUTOMATION STATION, LLC,  
Patent Owner

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Case No. IPR2023-01237  
Patent 9,586,805

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**PETITIONERS' REPLY TO PATENT OWNER'S RESPONSE**

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## I. INTRODUCTION

The Petition showed that the Challenged Claims are unpatentable. Patent Owner's Response fails to show otherwise. Patent Owner ("PO") relies on an incorrect standard for obviousness for many of its arguments—attempting to hold Petitioner to an improper bodily incorporation standard. Even under this higher, incorrect standard, PO misapprehends the Petition's proposed combination to form its attack on the petitioned grounds. Each of these errors is fatal to PO's arguments on their own—but even worse, PO's arguments fail on their own terms.

For example, Ground 1 covers all Challenged Claims. PO does not dispute that the *Van Vliet-Cable* combination teaches all limitations of the Challenged Claims. *See* POR, 9-22 *generally*. Instead, PO argues *only* against the combination of *Van Vliet* and *Cable*. *See id.* However, as discussed further below, PO's arguments are fatally flawed. Because Petitioner has shown that a POSITA would have been motivated to apply the teachings of *Cable* with *Van Vliet* and PO has failed to rebut this showing, the Challenged Claims of the '805 Patent are unpatentable on this basis alone.

PO's arguments are similarly flawed with respect to the other grounds and thus the Petition provides multiple independent bases on which to invalidate the Challenged Claims.

**II. GROUNDS 1, 3, AND 4: GROUNDS COMBINING *VAN VLIET* AND *CABLE***

PO does not argue that any limitation of the Challenged Claims is missing from the *Van Vliet-Cable* combination (*see e.g.*, POR, 9-22 (PO's arguments on Ground 1)). PO instead argues that a POSITA would not combine *Cable* and *Van Vliet*. PO is wrong.

Both the Petition and the declaration of Petitioners' expert Dr. Robert Durham (EX1003) describe in detail the rationale and motivation for combining *Van Vliet* with the teachings of *Cable*. Without fully duplicating those reasons here, they include at least: the desire to make *Van Vliet*'s system more easily traversable by operators for repairs maintenance, and/or physical inspection (Pet., 21; EX1003, ¶ 137), the similarities of the references (Pet., 22, EX1003 ¶ 138), and *Van Vliet*'s explicit instruction to look to other references for the spatial layout of its equipment (Pet., 23-24; EX1003, ¶ 139).<sup>1</sup> Importantly, unlike PO's attacks on the combination, these reasons for combining *Cable* and *Van Vliet* are tied to the *specific teachings*

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<sup>1</sup> The Petition also establishes that *Van Vliet* and *Cable* are in the same field of endeavor and directed to solving the same problem as the '805 Patent (Pet., 22; EX1003 ¶ 138).

of *Cable* used in the proposed combination—namely, the inclusion of an aisle walkway and positioning reels along opposing walls of a trailer.

**A. Even if *Cable* has different uses, a POSITA would have considered it in modifying *Van Vliet*.**

To attack the *Van Vliet-Cable* combination, PO first argues that *Cable*'s teachings are inapplicable to *Van Vliet* because *Cable* is for dispensing lubricant in a “fast service in a roadside environment.” POR, 9. But PO doesn't dispute that *Cable* meets the test for analogous art under *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004). *Cable* and *Van Vliet* are in the same field of endeavor and are directed to solving the same problem as the '805 Patent, *i.e.*, mobile systems using reels and hoses to deliver hydrocarbon liquids. Pet., 21-22; EX1003, ¶¶137-138. Additionally, as discussed above, *Cable* and *Van Vliet* use similar equipment, combined and deployed in a similar manner, to achieve a similar result. Pet., 22-24. Differences in their exemplary applications would not have discouraged a POSITA from combining their teachings.

PO's distinctions between *Cable*'s and *Van Vliet*'s intended uses are also primarily attorney argument unsupported by evidence. Nothing in *Cable* limits it to “fast service in a roadside environment”. *Cable* does not even mention the words “road”, “street”, “highway”, or “shoulder”, much less that *Cable*'s design is only useful in those surroundings. PO's assertions that *Van Vliet* is “not concerned with rapid servicing” and “does not share the same safety concerns” as *Cable* (POR, 12)

are contrary to the evidence. A POSITA would have known that downtime in a fracturing operation—including while rigging up/down refueling systems—added cost, and that areas surrounding the refueling systems were hazardous for workers. *See* EX1049 33:13-34:13; EX1004, ¶¶0002 (discussing “[d]angers to the existing way of proceeding”); EX1007, 2 (“increase worker safety by minimizing exposure time around the hot zones”). Even if the specifics of these concerns differ in different environments, a POSITA would have considered them analogous. *Cf.* EX1003, ¶¶137-138. PO also limits *Cable* to dispensing lubricant to road vehicles based on references it cites (POR, 9); but the USPTO deemed *Cable*’s relevant field broader, citing several references during prosecution about refueling systems for airplanes.<sup>2</sup> EX1005, 1; EX1056 & EX1057. Finally, PO differentiates *Cable*’s “driveable” van from *Van Vliet*’s towable trailer (POR, 12-13), but does not explain why that would discourage a POSITA from considering *Cable*’s teachings about similar equipment (*e.g.*, reels) in a van or interior equipment configuration for *Van Vliet*’s trailer.

PO’s expert merely parrots PO’s argument and cites little or no evidence supporting his interpretations of *Cable*’s and *Van Vliet*’s intended uses. *See* EX2004, ¶¶99-112. And, even if *Cable* and *Van Vliet* have different uses, a POSITA is “a

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<sup>2</sup> Moreover, PO’s own evidence characterizes diesel as a “lubricant”. EX2013, 11.

person of ordinary creativity, not an automaton,” and would consider *Cable*’s arrangement of equipment and reel components potentially useful in *Van Vliet*. See EX1003, ¶¶137-140; *KSR Int’l. Co. v. Teleflex, Inc.*, 127 S.Ct. 1727, 1742 (2007) (cannot assume “that a [POSITA] attempting to solve a problem will be led only to those elements of prior art designed to solve the same problem”). Such conclusory expert testimony contrary to the evidence and law should be afforded no weight. See *Skky, Inc. v. MindGeek, s.a.r.l.*, 859 F.3d 1014, 1022 (Fed. Cir. 2017).

**B. Patent Owner Applies the Wrong Obviousness Standard with respect to *Cable* and *Van Vliet***

PO’s next two arguments, that “Cable is not informative of a practical arrangement for Van Vliet” (POR, 13-21) and that “Cable teaches that the walkway is also a storage area” (POR, 21-22), fail from the start because they attempt to hold Petitioner to an improper bodily incorporation standard for obviousness. PO’s arguments improperly ask whether a POSITA could implement the *illustrated embodiment* of *Cable* with the *illustrated embodiment* of *Van Vliet*.

But “[t]he test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference[.]” *Allied Erecting & Dismantling Co. v. Genesis Attachments, LLC*, 825 F.3d 1373, 1381 (Fed. Cir. 2016) (quoting *In re Keller*, 642 F.2d 413, 425 (C.C.P.A. 1981)). Instead, the question is whether “a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed

***invention***[.]” *Id.* (quoting *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1361 (Fed. Cir. 2007)) (emphasis added); *see also In re Mouttet*, 686 F.3d 1322, 1332 (Fed. Cir. 2012) (“It is well-established that a determination of obviousness based on teachings from multiple references does not require an actual, physical substitution of elements.”). Indeed, the Federal Circuit has explained that whether one reference can be incorporated in another is “basically irrelevant” since the test for obviousness is “whether the claimed inventions are rendered obvious by the teachings of the prior art as a whole.” *In re Etter*, 756 F.2d 852, 859 (Fed. Cir. 1985) (en banc).

Starting with PO’s “practical arrangement” argument, PO argues that “[t]here is different equipment in Cable than there is in Van Vliet” and that “a POSITA would have understood that because there is different equipment between Cable and Van Vliet, Cable’s arrangement would not represent a viable option for arranging Van Vliet’s equipment.” POR, 13-14. This argument does not address whether the ***teachings*** of *Cable* can be applied to *Van Vliet* but rather argues against the ***physical incorporation*** of the illustrated embodiment of *Cable* into the illustrated embodiment of *Van Vliet*. *See, e.g.*, POR, 21 (“the equipment in Van Vliet cannot be arranged according to Cable’s arrangement because Van Vliet has different

equipment that would differ in size and shape from Cable's").<sup>3</sup> As discussed above, this is the wrong test.

PO's argument that "Cable teaches that the walkway is also a storage area" (POR, 21) is similarly based on an improper bodily incorporation standard because it also assumes physical incorporation of an embodiment of *Cable*'s walkway into *Van Vliet* and thus fails for analogous reasons. Once again, PO has applied the wrong test for obviousness.

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<sup>3</sup> PO continues to misapprehend the Petition's combination of *Van Vliet* and *Cable* to require that the reels in the combined system be oriented with the axes of the reels being perpendicular to the trailer walls. The Board already pointed out this misapprehension and rejected it in the Institution Decision—rightly pointing out that Petitioners "rely on both *Van Vliet* and *Cable*, that is, *Van Vliet* for its teaching of arranging groups of reels along opposing side walls of a trailer, and *Cable*'s teaching of arranging reels on opposite sides of a trailer." Paper 9, 9. Indeed, Dr. Rodgers admitted during his deposition that *Cable* teaches "orienting the spindle perpendicular to the axis or the direction in which those hoses are going to be deployed." See EX1049, 203:4-7.

**C. A POSITA would have considered *Cable*'s teaching of a walkway in arranging the system of *Van Vliet*.**

PO asserts that a POSITA would have been discouraged from incorporating *Cable*'s teaching of a central aisleway with reels along either side because *Cable* allegedly teaches that the "walkway is also a storage area." POR, 21. PO's argument is wrong for several reasons.

First, *Cable* does not state that the "walkway doubles as a storage area." Instead, *Cable* says "[t]he tank bays 19 and 21 are spaced apart a distance 22 (FIG. 2) *forming a walkway and storage area therebetween . . .*" EX1005, 2:56-58 (emphasis added). An equally plausible interpretation of *Cable* is that distance 22 is sufficiently wide for *both a walkway and storage area*. Indeed, *Cable* doesn't state that items in the storage area would block the walkway, as PO suggests; instead, *Cable* teaches the walkway is sufficiently wide to "allow[] a person to walk between the tanks . . ." *Id.* at 2:39. Additionally, even if *Cable* were properly interpreted as PO suggests, nothing in *Cable* requires the spacing 22 to be used as a storage area at the same time. PO's expert confirmed that a POSITA would not expect to use spacing 22 as a walkway while the van is in transit, which is when items would be stored there. *See* EX1049, 205:11-206:25. Those items would then be removed from spacing 22 for use during servicing while the van is stationary, facilitating safe use of spacing 22 as a walkway. *See id.* That use would not discourage a POSITA from incorporating *Cable*'s walkway as PO suggests.

Second, PO essentially repackages an argument the Board previously rejected (Paper 9, 15), and again fails to explain why the lack of complete identity of equipment between *Cable* and *Van Vliet* renders them so dissimilar that a POSITA would not even consider *Cable* in configuring *Van Vliet*'s system. The Board should again reject this argument as conclusory and unsupported. Moreover, to the extent PO argues *Van Vliet*'s trailer cannot incorporate *Cable*'s spacing 22 wide enough to accommodate both a walkway and a storage area, such an argument would impose a bodily incorporation requirement as discussed above. *See In re Mouttet*, 686 F.3d 1322, 1332 (Fed. Cir. 2012). PO's argument also wrongly assumes a POSITA could only blindly incorporate *Cable*'s exact aisleway configuration into *Van Vliet*'s system without applying any common sense, creativity, knowledge, or skill. *See KSR*, 550 U.S. at 421; *Randall Mfg.*, 733 F.3d at 1362. But a POSITA is not an automaton, *KSR*, 550 U.S. at 421, and a POSITA incorporating would be able to adjust the uses and width of *Cable*'s aisleway as needed to comply with accepted safety standards or other spatial requirements. *See* EX1004, [0027] ("The spatial orientation . . . of the equipment . . . is a matter of design choice for the manufacturer and will depend on space requirements."); *In re ICON Health & Fitness, Inc.*, 496 F.3d 1374, 1382 (Fed. Cir. 2007) ("[w]e do not ignore the modifications that [a POSITA] would make to a device borrowed from the prior art. . . . [A POSITA]

would size the components from [the prior art] appropriately for [PO's claims], therefore producing an embodiment meeting [those] claims.”).

Accordingly, Petitioner has shown that a POSITA would have been motivated to combine *Cable* and *Van Vliet*, and PO has failed to rebut this showing.

### III. GROUND 2: VAN VLIET RENDERS CLAIM 17[H] OBVIOUS.

The only element in claim 17 that PO argues is missing from *Van Vliet* is Claim 17[h]—“wherein the mobile trailer includes first and second opposed trailer side walls, and a first group of the hoses are deployable from the first trailer side wall and a second group of the hoses are deployable from the second trailer side wall.” But, as explained in the Petition and Dr. Durham’s declaration, *Van Vliet* does teach or render obvious Claim 17[h]. *See* Pet., 47-48; EX1003 ¶¶231-233. Even if there are other possible interpretations of *Van Vliet* with regard to how the hoses are deployed, that would only preclude *Van Vliet* from *anticipating* claim 17. PO does not dispute that the configuration shown in Dr. Durham’s declaration in which hoses are deployed from both sides is at least one of the limited number of arrangements that a POSITA would choose for *Van Vliet*’s trailer. Therefore, designing *Van Vliet*’s trailer to have groups of hoses deployable from each side would have been an obvious design choice for a POSITA to implement. *See KSR* 550 U.S. at 402 (“When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill in the art has

good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense.”).

#### **IV. GROUNDS 4, 7, AND 8: GROUNDS COMBINING *VAN VLIET* WITH *COXREELS***

PO argues that a POSITA would not combine *Van Vliet* and *Coxreels*. Both the Petition and Dr. Durham’s Declaration describe in detail the rationale and motivation for combining *Van Vliet* with the teachings of *Coxreels*. Those reasons include at least: that solutions embodying the teachings of *Coxreels* were commercially available (Pet., 54-55; EX1003 ¶¶ 249-250); that *Coxreels* was marketed in the oil and gas industry (Pet., 55); and that *Coxreels* taught industry preferred features such as “a sturdy one piece all welded ‘A’ frame base, low profile outlet riser and open drum slot design provides a non-crimping, flat smooth hose wrap” (Pet., 55; EX1003 ¶ 251); *see also* EX1049, 168:24-169:3 (Dr. Rodgers explaining during his deposition that “[g]enerally speaking, if you have the fluid passage through, you can reel it in in a more automated or -- you can crank it in more easily than if you just have to wrap a hose around a reel manually without having the flow of passage through”).

##### **A. PO Applies the Wrong Obviousness Standard regarding *Coxreels***

**and *Van Vliet***

As with respect to *Cable* discussed above, PO arguments that a “POSITA would have recognized that the Coxreels 1125 Series reel would have been unsuited for an automated fueling station as in *Van Vliet*” (POR, 25) and that “the Coxreels 1125 Series reel would have resulted in an undesirable operating configuration” (POR, 28), advance an improper bodily incorporation standard for obviousness.

PO’s “unsuitability” argument (POR, 25) is based on characteristics of *specific models* of reel discussed in the *Coxreels* reference as opposed to the teachings and information disclosed in that reference. *See e.g.*, POR, 27 (“The Coxreels 1125 Series reel ***also comes in a 1 inch model ....***”) (emphasis added). PO’s argument improperly focuses on *physical incorporation* of these specific reels rather than whether a POSITA would have been motivated to combine the teachings of *Coxreels* with *Van Vliet*. This is an improper test for obviousness.

PO’s “undesirable operating configuration” argument (POR, 28) is perhaps even more irrelevant. It assumes not only physical incorporation but also certain requirements and parameters for hypothetical uses of *Van Vliet*’s system that are discussed nowhere in that reference. *See e.g.*, POR, 28-29 (“A “small” frac operation may require 7,500 gallons of diesel in a 12-hr period, a “large” frac operation may require 12,000 gallons in a 12-hr period, and a “superfrac” may require 24,000 gallons or more in a 12 hour period.”); POR, 29 (“For safety purposes, pump

pressure should be limited to approximately 60 psi.”). Even if PO was right that certain of *Coxreels*’ reels could not have been physical incorporated into *Van Vliet*’s trailer—they are not (*see supra*. Section IV.B below)—PO’s arguments still fail at the outset for applying an improper bodily incorporation standard in their analysis.

Thus, Petitioner has shown that a POSITA would have been motivated to combine *Coxreels* and *Van Vliet* and PO has failed to rebut this showing.

**B. A POSITA would have combined *Coxreels*’ reel with *Van Vliet*.**

First, PO complains that *Coxreels*’ reel was not specifically marketed for fuel delivery in fracturing. POR 24. However, the *Coxreels* website marketed its reels for “Petroleum”, which a POSITA would have understood includes fuels such as diesel. EX1030, 5-6. Moreover, PO’s expert Dr. Rodgers admitted that a POSITA would have considered hose reels from even more unrelated agriculture and irrigation applications. EX1049, 34:14-36:22; EX1051, Abstract;<sup>4</sup> *see also* EX1008, 1 (*Coxreels* referencing “agricultural spraying” and “farming” applications).

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<sup>4</sup> Dr. Rodgers’ declarations in IPR2023-01236 and IPR2023-01238 on the related ’118 and ’955 Patents mistakenly cite Exhibits 2007 and 2008, which were not provided with PO’s responses. However, he confirmed at his deposition that he was referencing the document attached here as EX1051. EX1049, 36:6-17.

PO also argues that *Coxreels*' reel contains either (a) a brass inlet that would have been unsuitable for use with diesel, or (b) an AFLAS seal that would not withstand temperatures below -3°C. POR 25-27. Notably, the Petition does not rely on those materials from *Coxreels* (Pet., 54-57, 78-79), and so PO's argument is largely irrelevant to Petitioners' grounds. *See* Section IV.A, *supra*. But assuming, *arguendo*, that a POSITA would bodily incorporate those additional materials into *Van Vliet*'s trailer, they do not undermine the obviousness of that combination.

Regarding *Coxreels*' AFLAS seal, Dr. Rodgers only asserted that refueling systems in fracturing are exposed to *outdoor* temperatures in that range. EX1049, 127:22-128:4. PO presents no evidence that the *interior* of *Van Vliet*'s trailer—where the reels are located—would reach those temperatures for sufficient time to compromise the seal.<sup>5</sup> PO also wrongly assumes that a POSITA would have had to build *Van Vliet*'s system for extremely cold climates. To the contrary, many refueling companies would have designed systems for regions with warmer climates. EX1049, 129:21-130:10; EX1055, ¶¶15-16. Regarding *Coxreels*' brass inlet, PO's

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<sup>5</sup> Indeed, if it did, the diesel fuel would become more viscous (less pumpable), and so a POSITA would have already taken measures to keep the interior of a *Van Vliet* trailer carrying diesel above that temperature. EX1055, ¶¶17-18; *see* EX1049, 129:5-12.

evidence only indicates that exposure to brass may promote formation of gel deposits in vessels when diesel is stored for extended periods or at (unspecified) high temperatures, and also teaches using deactivators to counteract those issues where necessary. EX2013, 9 (§X3.1.1 & §X.3.2.3.1). Therefore, a POSITA would have understood not been discouraged from using a brass inlet with diesel. In any event, neither *Van Vliet's* refueling system nor the '805 Patent is limited to diesel,<sup>6</sup> and nothing suggests that *Coxreels'* reels with brass inlets would be unsuitable with other fuels.

At most, PO's evidence indicates that hose reels with brass fluid inlets or AFLAS seals might have been less optimal for certain fuels or extreme environments without further modifications. But that does not refute obviousness, particularly for many other uses that a POSITA would have considered.<sup>7</sup> *Corephotonics, Ltd. v.*

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<sup>6</sup> EX1004, Title (“***Fuel*** Delivery System and Method”); EX1001, 3:31-35 (examples provided for fuel delivery, “but station 20 may be used in mobile delivery of ***other fluids***”).

<sup>7</sup> And if a POSITA considered these materials unsuitable for a particular application, they would have used alternative non-corrosive materials. EX1055, ¶19; EX2012, 76:3-21; *In re ICON Health & Fitness, Inc.*, 496 F.3d 1374, 1382 (Fed.

*Apple Inc.*, No. 2020-1961, 2021 WL 4944471, at \*6 (Fed. Cir. Oct. 25, 2021) (“[I]t is a commonplace fact that design decisions entail making tradeoffs among multiple objectives,” but “this does not necessarily obviate motivation to combine” (quoting *Allied Erecting and Dismantling Co. v. Genesis Attachments, LLC*, 825 F.3d 1373, 1381 (Fed. Cir. 2016))); *Fatigue Fracture Technology, LLC v. Navistar, Inc.*, 2020 WL 7689819, \*4–\*5 (Fed. Cir. 2020) (nonprecedential) (rejecting patentee’s argument that a POSITA would not be motivated to combine a prior art process for manufacturing rods that was too slow; the claims did not specify a timeframe, and prior art would be faster for certain types and sizes of rods).

PO’s next argument relies on a hypothetical model created by its expert to argue that **certain** models of *Coxreels*’ reels for **certain** hose sizes and lengths would have required pumping fuel in *Van Vliet*’s system at unsuitably high pressures to deliver sufficient fuel for **certain** fracturing operations. POR 28-32. But, again, none of the Petition, the prior art, or the ’805 Patent claims require any particular hose size or length, model of *Coxreels*’ reels, or volume of fuel delivery.<sup>8</sup> Nor is *Van*

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Cir. 2007) (“we do not ignore the modifications that [a POSITA] would make to a device borrowed from the prior art”).

<sup>8</sup> See also EX1055, ¶41 (not all fracturing jobs require 7,500 gal/12 hours).

*Vliet* or the '805 Patent limited to delivering fuel for fracturing operations of any particular size. Indeed, the '805 Patent claims are *apparatus* claims that only recite “[a] distribution station” with no limitations on or reference to its intended use. EX1001, claims 1 and 17; see *Edgewell Pers. Care Brands*, 998 F.3d at 921 (apparatus claim covers what the apparatus is and not what it does). Therefore, Dr. Rodgers’ model is irrelevant to whether a POSITA would combine certain teachings of *Coxreels* with *Van Vliet*. See *supra*. Section IV.A.

Even if Dr. Rodgers’ model was relevant, it does not support his own opinions. Dr. Rodgers asserts that *Van Vliet*’s system using *Coxreels*’ 1125 series reels would need to pump fuel at a pressure of 440 psi to deliver 7,500 gallons in 12 hours. POR 30. However, his declaration does not show any such calculation, and the model from his declaration’s Appendix does not produce that pressure at the stated parameters. EX2004, ¶ 180; EX1052;<sup>9</sup> EX1055, ¶¶22-23.

The model also rests on numerous unsupported assumptions about parameters for refueling systems like *Van Vliet*’s. First, Dr. Rodgers assumes that *Van Vliet*’s

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<sup>9</sup> Exhibit 12 to Dr. Rodgers’ deposition was the native Excel file of his model, which Petitioners understand cannot be filed with the Board. EX1052, Petitioners have provided PDF prints of that file from the normal view (pages 1-4) and the “Show Formulas” view (pages 5-8) in Excel.

system would have required 700-foot hoses purportedly based on Petitioners' expert's testimony. POR 28; EX2004, ¶171. But Dr. Durham never said that 700-foot hoses were required. EX2012, 68:6-17 ("[I]t depends. ... A different designer...may choose a smaller length."). PO's assumption also ignores evidence of refueling systems like *Van Vliet's* with hoses only 200-450 feet long. EX1007, 3 ("300-450' feet of 1" hose"); EX2004, 81 ("A" and "B" listing 200-foot hose lengths); EX1055, ¶25. And PO's assumption of hoses having an inner diameter of only 3/8-inches depends on the same incorrect assumption about hose length. POR 28; EX2004, ¶171; *see also* EX1055, ¶26.

Dr. Rodgers also assumes that *Van Vliet's* system would only dispense fuel from 3 hoses simultaneously, even though *Van Vliet* and similar refueling systems included many more hoses. EX1004, Fig. 1 (10 hoses); EX1007, 3 (24 hoses); EX1055, ¶¶27-30. Finally, Dr. Rodgers assumes that a POSITA would consider operating pressures above 60 psi unacceptable because they would risk spilling large amounts of fuel if a hose is damaged. POR 29; EX2004, ¶177. But the hoses he assumed were rated for 90-150 psi pressures, and *Van Vliet* already had other safeguards (*e.g.*, override valves, pans) to limit spills. EX2004, ¶181; EX2019; EX1004, ¶¶ 0020, 0022-0023; EX1055, ¶34. Dr. Rodgers conceded that these assumptions were based solely on his general expertise (and hindsight hearsay regarding PO's systems today), but he has no prior experience in operating or even

observing refueling systems during fracturing operations. *See* EX1049, 14:5-21; 15:12-22; 16:23-25; 146:3-148:12; 149:8-16; 150:8-12; 152:21-153:22. Since Dr. Rodgers' arbitrary assumptions are contrary to the evidence, his opinions are not entitled to any weight. *See Skky, Inc. v. MindGeek, s.a.r.l.*, 859 F.3d 1014, 1022 (Fed. Cir. 2017). In fact, assuming parameters based on the prior art, Dr. Rodgers' model shows that even a single *Van Vliet* system using *Coxreels*' reels could deliver sufficient fuel for many fracturing operations within the hoses' pressure limits of 90-150 psi and even Dr. Rodgers' artificially-low operating pressure limit of 60 psi. EX1058;<sup>10</sup> EX1055, ¶¶35-41. So, if anything, Dr. Rodgers' model confirms that the combination would have been obvious.

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<sup>10</sup> As Dr. Rodgers testified that EX1052 (the Appendix to EX2004) is a "generic calculator" that was produced in "whatever state the file was left in when [he] happened to email it" to PO's attorneys, but "you can just change those input numbers [shaded in blue] to get a different condition." EX1049, 160:1-162:7. EX1058 is a modified version of the first page of EX1052 that reproduces model "B" from EX1052 as "B\_1" through "B\_4" but changes the inputs in the green shaded cells, including the corrected "total flow rate" of 21.5 gpm, consistent with Dr. Rodgers' testimony. *Id.*, 167:5-20. The updated resulting calculations are shaded in orange.

**V. GROUNDS 5-8: GROUNDS INCLUDING *AFD*****A. The *Van Vliet* - *AFD* combination teaches hoses deployed from both sides of a trailer.**

PO first asserts that “*AFD* does not definitively disclose hoses deployed from [sic] both sides.” POR, 33. However, the standard for obviousness is not whether or not a reference “definitively disclose[s]” a claim element but rather what a POSITA would have understood from a reference. *See KSR* 550 U.S. at 420 (“[I]n many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle.” Dr. Durham explained why a POSITA reading *AFD* would have understood hoses to be deployed from both sides of the trailer. *See* EX1003, ¶¶ 277-278. Dr. Durham further explains why this would also teach an aisle walkway. *See id.*, ¶¶ 279-280. Dr. Rodgers’ criticisms of that reading are merely unfounded speculation that the hoses shown on the far side of *AFD*’s trailer could have come from some unspecified phantom piece of equipment that (if it existed) could have been cropped out of the photograph. *See* EX1049, 97:12-15 (Q: “You don’t know if there was any equipment back there that had hoses.” A: “I don’t know one way or the other because it’s been cropped out.”); *see also id.*, 96:20-97:1 (“it’s not really much of an analysis”). Such lay speculation is not entitled to any weight here. Moreover, Dr. Rodgers does not dispute that the configuration explained in Dr. Durham’s declaration in which *AFD*’s hoses are deployed from both sides of the trailer is one of a limited number of possible arrangements that a POSITA would

understand from the reference. Therefore, designing *AFD*'s trailer to have groups of hoses deployable from each side of the trailer would have been an obvious design choice for a POSITA to implement. *See KSR* 550 U.S. at 402 (“When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill in the art has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense.”).

## **VI. SECONDARY CONSIDERATIONS DO NOT OVERCOME THE STRONG OBVIOUSNESS GROUNDS**

As an initial matter, the Board cannot presume nexus to the '805 Patent as PO suggests. POR, 39. PO relies on the same evidence of secondary considerations for this patent as well as the different claims of the '118 and '955 Patents. *Compare* POR, 39-45 with IPR2023-01236, Paper 15, 35-40 & IPR2023-01238, Paper 15, 50-55.<sup>11</sup> But “the same evidence of secondary considerations cannot be presumed to be attributable to two different combinations of features.” *Fox Factory, Inc. v. SRAM, LLC*, 944 F.3d 1366, 1378 (Fed. Cir. 2019).

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<sup>11</sup> PO also marks its refueling units with at least 15 other patents, further rebutting any nexus to the '805 Patent. EX2005, 1.

**A. Praise and Commercial Success**

PO also lacks sufficient evidence that its refueling systems practice the '805 Patent's claims. PO provides only Dr. Rodgers' bare conclusion that PO's units practice the independent claims and three screenshots from a YouTube video.<sup>12</sup> EX2004, ¶214. Without mapping the claim elements to components of PO's systems, Dr. Rodgers' bare conclusions cannot support nexus. *Volvo Penta of the Americas, LLC v. Brunswick Corp.*, 81 F.4th 1202, 1211 (Fed. Cir. 2023); *TalexMedical, LLC v. Becon Med. Ltd.*, No. 2021-2069, 2022 WL 2898934, at \*9 (Fed. Cir. July 22, 2022). Even the screenshots do not show several claimed elements:

- pump on the mobile trailer
- fluid level sensors associated with hoses
- valves between manifolds and hoses

Moreover, any nexus is disproven by PO's own arguments about the alleged benefits of its refueling systems. For example, both the award to PO's inventor and PO's response tout benefits of "hot refueling" and removing workers from a "hot zone" around fracturing equipment. EX2023, 5; POR, 2 & 4-5. But the prior art *Van*

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<sup>12</sup> These screenshots are also only demonstratives, not evidence of record.

*Vliet*, *AFD*, and Frack Shack systems touted these same benefits,<sup>13</sup> and the claims' elements absent from those systems (*e.g.*, fluidly-connected hose reels, aisle walkways, a fluid register's location) have nothing to do with the allegedly-praised and successful benefits. *See* EX1055, ¶¶7-8. Praise or success of PO's system based on features in prior art refueling systems cannot rebut the obviousness of claims that simply add *other* features. *See ClassCo, Inc. v. Apple, Inc.*, 838 F.3d 1214, 1220 (Fed. Cir. 2016) (discounting evidence relating to features in the prior art); *Ethicon Endo-Surgery, Inc. v. Covidien LP*, 812 F.3d 1023, 1034-35 (Fed. Cir. 2016) (similar); *Bayer Healthcare Pharm., Inc. v. Watson Pharm., Inc.*, 713 F.3d 1369, 1377 (Fed. Cir. 2013) ("praise of what was clearly rendered obvious" is not persuasive). PO also argues that wired fluid level sensors (instead of wireless) contributed to its systems' alleged success. *See e.g.*, '118 POR, 4-6; '955 POR, 4-6. But none of the '805 Patent's claims require wired sensors.<sup>14</sup> *See* EX1055, ¶6;

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<sup>13</sup> EX2004, ¶¶66, 73; EX1003, ¶¶ 43, 109, 259 n.310; EX1004, ¶¶0002 (discussing "[d]angers" on site), 0003 (system "reduc[es] the likelihood that a fuel tank ... during fracturing ... will run out of fuel"); EX1007, 2; EX1017, 1-2 ("remove[s] workers from the hot zone" and "[n]o slow down or stopping to refuel").

<sup>14</sup> *Van Vliet* also discloses wired sensors. *See* EX1004, [0020]; EX1055, ¶6.

*Ethicon Endo-Surgery*, 812 F.3d at 1034 (discounting success due to unclaimed features).

### **B. Alleged Copying and Licensing**

First, PO merely accused Petitioners and Comanche of infringing its patents. POR, 41-43. Even if they were found to infringe—and they were not—infringement is not the same as copying. *See Wyers v. Master Lock Co.*, 616 F.3d 1231, 1246 (Fed. Cir. 2010); *Iron Grip Barbell Co., Inc. v. USA Sports, Inc.*, 392 F.3d 1317, 1325 (Fed. Cir. 2004). Aside from bare attorney argument, there is no evidence that Petitioners or anyone else copied its systems. Petitioners’ citing of PO’s ’805 Patent as prior art in a patent application is not copying either. POR, 41. If anything, it suggests the opposite—that Petitioners thought their invention was patentable over PO’s and therefore different, and Petitioners simply had a duty of candor to cite known art.

Regarding Comanche’s license, PO merely asserts that Comanche took a license to settle litigation. POR, 44. PO provides no evidence of the agreed royalty amount or the license’s other terms, that Comanche acknowledged practicing PO’s patents, or ***has actually paid any royalties***. Such limited evidence of a single license should have no weight. *See In re Cree, Inc.*, 818 F.3d 694, 703 (Fed. Cir. 2016) (based solely on affidavits “it is difficult for the court to determine if the licensing program was successful either because of the merits of the claimed invention or

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because they were entered into as business decisions to avoid litigation, because of prior business relationships, or for other economic reasons”); *In re GPAC Inc.*, 57 F.3d 1573, 1580 (Fed. Cir. 1995) (similar).

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PO’s only arguable secondary considerations consist of one award, a single license agreement, and a measure of its system’s commercial use with no context for its pervasiveness in the market. POR, 40-44. Such limited evidence cannot overcome Petitioners’ strong obviousness case.

## VII. CONCLUSION

Petitioner respectfully requests that the ’805 Patent claims be cancelled as unpatentable under 35 U.S.C. §318(b).

Respectfully submitted,

BAKER BOTTS L.L.P.

August 28, 2024  
Date

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**CERTIFICATE OF COMPLIANCE**

I hereby certify that this Petitioners' Reply to Patent Owner's Response complies with the type-volume limitations of 37 C.F.R. § 42.24(c)(1) because it contains 5,594 words (as determined by the Microsoft Word word-processing system used to prepare the reply), excluding the parts of the reply exempted by 37 C.F.R. § 42.24(c).

Dated: August 28, 2024

By: /Elizabeth D. Flannery/

Elizabeth D. Flannery  
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Lead Counsel for Petitioner

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**CERTIFICATE OF SERVICE**

In accordance with 37 C.F.R. § 42.6(e), the undersigned certifies that on August 28, 2024, a complete and entire copy of the foregoing **PETITIONERS' REPLY TO PATENT OWNER'S RESPONSE** and supporting exhibits were served on Patent Owner via electronic mail at the below addresses:

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