IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO
DENVER DIVISION

CRUSOE ENERGY SYSTEMS LLC,	§	
	§	
Plaintiff,	§	
	§	Civil Action No. 1:22-CV-2142-NYW-STV
v.	§	
	§	
ALKANE MIDSTREAM LLC,	§	**HONORABLE**
	§	**JUDGE NINA Y. WANG**
Defendant.	§	
	§	**HONORABLE**
	§	**JUDGE SCOTT T. VARHOLAK**

CRUSOE ENERGY SYSTEMS LLC'S RESPONSE TO ALKANE MIDSTREAM LLC'S MOTION TO DISMISS COUNTS ONE, TWO, THREE, AND FOUR OF PLAINTIFF'S SECOND AMENDED COMPLAINT [ECF 27] PURSUANT TO FEDERAL RULE OF CIVIL PROCEDURE 12(b)(6)

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I. INTRODUCTION

Defendant Alkane Midstream LLC's ("Alkane") Motion to Dismiss Plaintiff Crusoe Energy Systems LLC's ("Crusoe") infringement claims should be denied for three separate and independent reasons. First, Alkane's reliance on a single asserted claim as the basis for its patent-ineligibility arguments is improper given the significant differences in scope and character of the claims across the Asserted Patents. Second, under step one of the *Mayo/Alice* analysis, Alkane fails to meaningfully engage with the language of the asserted claims and instead over-generalizes what the claims are purportedly "directed to." As a result, the alleged abstract idea articulated by Alkane fails to capture the substance of the asserted claims. Third, even if the asserted claims were directed to an abstract idea—and they are not—at step two of the *Mayo/Alice* analysis Alkane myopically focuses on portions of the specification describing certain previously known elements, while disregarding disclosures indicating the non-conventionality of ***the combination of elements*** recited in the claims.

II. LEGAL STANDARDS

In the context of a motion to dismiss under Rule 12(b)(6), "[f]acts are viewed in the light most favorable to the plaintiff, and all reasonable inferences are drawn in the plaintiff's favor." *Dias v. City & Cnty. of Denver*, 567 F.3d 1169, 1178 (10th Cir. 2009).[1] Patent eligibility may be determined at the Rule 12(b)(6) stage "only if there are no plausible factual disputes after drawing all reasonable inferences from the intrinsic and Rule 12 record in favor of the [plaintiff]." *Coop. Entm't, Inc. v. Kollective Tech., Inc.*, 50 F.4th 127, 130 (Fed. Cir. 2022). Accordingly, "dismissal for lack of patentable subject matter" at the pleading stage should be "the exception, not the

[1] *See also Brain Synergy*, 2016 WL 11372846, at *3.

rule."*Ultramercial, Inc. v. Hulu, LLC*, 722 F.3d 1335, 1339 (Fed. Cir. 2013), vacated on other grounds by *WildTangent, Inc. v. Ultramercial, LLC*, 134 S. Ct. 2870 (2014); *see also Brain Synergy*, 2016 WL 11372846, at *4.

Whether a claim recites patent-eligible subject matter is a question of law based on underlying questions of fact. *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018). Any fact that is pertinent to the ultimate question of patent eligibility "must be proven by clear and convincing evidence." *Id.* Thus, to hold that a patent is directed to ineligible subject-matter at the Rule 12(b)(6) stage, "the ***only*** plausible reading of the patent must be that there is clear and convincing evidence of ineligibility." *Ultramercial*, 722 F.3d at 1339.

Under step one of the *Alice/Mayo* analysis, one "cannot simply ask whether the claims ***involve*** a patent-ineligible concept," because essentially every claim will involve or implicate an ineligible concept at some level. *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016). Rather, the inquiry requires "looking at the 'focus' of the claims, their 'character as a whole,'" to determine if they are ***directed to*** excluded subject matter, such as an abstract idea. *Electric Power Grp. v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016) (internal citation omitted); *see also Trading Techs. Int'l, Inc. v. IBG LLC*, 921 F.3d 1378, 1384 (Fed. Cir. 2019) (explaining that courts must "evaluate '***the focus*** of the claimed advance over the prior art' to determine if the ***character of the claim as a whole***, considered in light of the specification, is directed to excluded subject matter." (emphasis added)).

Step two of the *Alice/Mayo* analysis becomes relevant only if the Court finds that the focus of the claims is a patent-ineligible concept. The ultimate question at this stage of the analysis is whether the claims recite an "inventive concept." *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S.

208, 217 (2014). The inquiry is factual in nature and requires evaluation of whether the claim elements (individually or as a combination) were "well-understood, routine and conventional to a skilled artisan in the relevant field" at the time of the patent. *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018). Factual assertions in a patent specification concerning the inventive nature of the elements (or combination of elements) recited in the claims are sufficient to create a factual dispute that prevents resolving the eligibility question as a matter of law. *See id.* at 1370 ("[S]ummary judgment was improper, given the fact questions created by the specification's disclosure.").

III. ARGUMENT

Alkane's Motion suffers from three fatal flaws, each of which independently warrants denial of the Motion (in whole or in part). First, Alkane's patent-ineligibility arguments are based on a single asserted claim—claim 1 of the '307 Patent—that Alkane has not shown to be representative. As a result, patent eligibility of the other asserted claims cannot be determined based on claim 1 of the '307 Patent, and Alkane's Motion should be denied as to the other asserted claims. Second, in an effort to frame the asserted claims as abstract at Step 1 of the *Alice/Mayo* analysis, Alkane describes them at such a high level of abstraction that its purported abstract idea fails to capture the substance of the claims. This failing is reason alone to deny Alkane's Motion. Third, in addressing Step 2 of the *Alice/Mayo* analysis, Alkane disregards portions of the patent specification evidencing the non-conventionality of the combination recited in the claims. Because these disclosures give rise to fact questions, resolving the patent-eligibility at this stage is improper, and Alkane's Motion should be denied.

A. The '307 Patent is Not Representative of All Asserted Claims.

Alkane has not demonstrated that claim 1 of the '307 Patent—the sole claim on which its eligibility arguments are based—is representative of all asserted claims. Absent agreement of the parties, demonstrating that a single claim is representative of all asserted claims requires far more than the conclusory assertions offered by Alkane. *See Brain Synergy Inst., LLC v. UltraThera Techs.*, Inc., No. 1:13-CV-01471-CMA-NYW, 2016 WL 11372846, at *4 (D. Colo. Jan. 28, 2016) (Wang, J.), report and recommendation adopted, No. 13-CV-01471-CMA-NYW, 2016 WL 1211841 (D. Colo. Mar. 29, 2016) (rejecting the defendant's conclusory assertion that a single claim is representative "for all of the other asserted claims," and holding that each claim must be considered separately "unless the moving party can establish (or the parties stipulate) that a particular claim is representative of others"); *see also Berkheimer*, 881 F.3d at 1365-66.

As another district court explained, because each claim of a patent is "presumed valid ***independently*** of . . . other claims," a party that seeks to treat a single claim as representative must "offer[ ] a ***substantial*** rationale" for doing so. *PPS Data, LLC v. Jack Henry & Associates, Inc.*, 404 F. Supp. 3d 1021, 1030 (E.D. Tex. 2019) (emphasis added).[2] Further, that rationale "must be '***directly tethered to the claim language***'" and must ***not*** ***"'overgeneraliz[e] the claims***' in a manner that might avoid pertinent distinctions." *Id*. (quoting *Enfish*, 822 F.3d at 1337; *Solutran, Inc. v. Elavon, Inc.*, 931 F.3d 1161, 1168 (Fed. Cir. 2019)) (emphasis added).

Alkane does exactly what the *PPS Data* court warned against—overgeneralizing and failing to directly address the language of the claims. Specifically, Alkane points to a single

[2] *See also Atos, LLC v. Allstate Ins. Co.*, No. 1:20-cv-06224-ARW, 2021 WL 6063963, *7 (N.D. Ill. Dec. 22, 2021) (explaining that "it is clear" that conclusory assertions of representativeness are "not enough").

independent claim from each patent—"Claim 1 of the '309 Patent, Claim 1 of the '821 Patent, and Claim 1 of the '059 Patent"—to support its assertion that ***all asserted claims*** from those patents are "substantially similar [to Claim 1 of the '307 Patent] in that they contain the same purely functional language and are linked to the same abstract idea." ECF 73 at 7. But Alkane's characterization of what the claims are purportedly "directed to" is highly abstracted from the actual language of the claims and thus fails to capture the substance of the asserted claims. As explained below, the claims are not directed to simply "utilizing gas to power computers," as Alkane contends, but rather to unconventional ways of mitigating natural gas flaring at well sites by using stranded natural gas to generate electricity that is consumed by a distributed computing system at the well site. *See infra* at Section III.B.1.

Alkane's over generalizations also fail to capture the distinctions between asserted claims—both those within a single patent[3] and across the four Asserted Patents. As an example, unlike claim 1 of the '307 Patent, claim 1 of the '309 Patent recites a "monitoring and control system" adapted to "monitor the gas profile of the fuel gas" and, "upon determining a change" therein, "automatically modulate an electrical load of the distributed computing system." *Compare* '307 Patent at 28:2-49 *with* '309 Patent at 28:2-49. Claim 1 of the '059 Patent similarly recites "automatically monitoring . . . one or more operational parameters of the power generation module," and, "upon determining a change" therein, "modulating an electrical load of the plurality

[3] Alkane fails to address the additional elements recited in the dependent claims of any Asserted Patent, and instead treats claim 1 of each patent as representative of all other claims in the patent. The Federal Circuit has squarely rejected that approach, stating that "[a] claim is not representative simply because it is an independent claim" and recognizing that the distinctions in dependent claims should be addressed in patent-eligibility analysis. *Berkheimer*, 881 F.3d at 1365-66.

of distributed computing units by the monitoring and control system." '059 Patent at 28:2-35. Exhibit 1 (attached hereto) includes additional examples of distinct elements that are recited in other asserted claims.[4]

In its attempt to generalize across all four Asserted Patents, Alkane disregards the fact that "different patents must generally contain patentably distinct inventions," and thus "claims in one patent will not usually represent . . . the claims of another patent." *See also PPS Data*, 404 F. Supp. 3d at 1031 (E.D. Tex. 2019) (citing *Novartis Pharm. Corp. v. Breckenridge Pharm. Inc.*, 909 F.3d 1355, 1362 (Fed. Cir. 2018)). "Accordingly, absent some case-specific justification"—which Alkane has not provided—"courts should generally ***not*** find a claim in one patent representative of other claims in other patents." *Id.*

Alkane has not provided any substantial rationale for treating claim 1 of the '307 Patent as representative of the other asserted claims (either in the '307 Patent or any other Asserted Patent); thus, each asserted claim must be considered separately. *See Brain Synergy*, 2016 WL 11372846, at *4. And because Alkane's patent-eligibility arguments are based entirely on claim 1 of the '307 Patent, Alkane's Motion should be denied for all other asserted claims regardless of the Court's determinations with respect to the *Alice/Mayo* analysis.

In addition, the Court should not entertain any new "representativeness" arguments presented by Alkane in its Reply because any such arguments have been waived. *See*, *e.g.*, *Medina v. Safeway Inc.*, No. 1:20-cv-03726-NYW, 2022 U.S. Dist. LEXIS 39775, *14, 2022 WL 672488

[4] Claims that are not presently asserted in this case include still further distinctions. Because those claims are not the subject of Alkane's motion, however, they are not addressed herein.

(D. Colo. Mar. 7, 2022) (Wang, J.) ("Arguments not raised or inadequately developed in an opening brief are waived.") (citing *United States v. Hunter*, 739 F.3d 492, 495 (10th Cir. 2013)).

B. Alice/Mayo Step 1: The Asserted Claims Are Not "Directed To" An Abstract Idea.

Alkane erroneously contends the claims are directed to the abstract idea of "utilizing gas to power computers." ECF 73 at 6-7. But Alkane cites no support for the proposition that "utilizing gas to power computers" is in fact an abstract idea. Notably, it does not fall within any of the subject-matter categories that have been recognized as abstract ideas, which include mathematical concepts; methods of organizing human activity (including fundamental economic practices, commercial or legal interactions, managing personal behavior, or managing relationships or interactions); and mental processes.[5]

Regardless, Alkane's formulation of the purported abstract idea is improper because it ignores the specific language of the claims, and instead relies on an overgeneralization of what the claims are purportedly "directed to." ECF 73 at 7. Case after case makes clear that this type of overgeneralization—which is "untethered from the language of the claims"—is improper because it "all but ensures that the exceptions to § 101 swallow the rule." *See*, *e.g.*, *Enfish, LLC v. Microsoft*

[5] *See, e.g.*, Manual of Patent Examining Procedure (2019), § 2106.4(a) (United States Patent and Trademark Office, 2019) (enumerating subject-matter categories that have been recognized as abstract ideas by the Supreme Court and Federal Circuit); *id.* at § 2106.4(a)(2) (collecting decisions in which concepts falling within the enumerated subject-matter categories have been found "abstract"); *see also Alice*, 573 U.S. at 218 (explaining that mathematical concepts, such as those at issue in *Parker v. Flook*, 437 U.S. 584 (1978) and *Gottschalk v. Benson*, 409 U.S. 63 (1972) are abstract ideas); *id.* at 219-220 (explaining that certain "methods of organizing human activity," such as "fundamental economic practice[s] long prevalent in our system of commerce," are abstract ideas); *id.* at 220 (explaining that long-standing "method[s] of organizing human activity" are abstract ideas); *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372, (Fed. Cir. 2011) (explaining that a mental process that "can be performed in the human mind, or by a human using a pen and paper" is an abstract idea).

Corp., 822 F.3d 1327, 1337 (Fed. Cir. 2016); *Core Wireless Licensing S.A.R.L. v. LG Elecs., Inc.*, 880 F.3d 1356, 1361 (Fed. Cir. 2018) ("[A]t step one, we must articulate what the claims are directed to with enough specificity to ensure the step one inquiry is meaningful."). Alkane's failure to articulate an abstract idea that captures the character of the claims as a whole is reason alone to deny its Motion. *3G Licensing, S.A. v. HTC Corp.*, 2019 WL 2904670, at *2 (D. Del. 2019) ("[A]ll I need to decide today is that the claim is not directed to the abstract idea articulated by defendant."); *Mod Stack LLC v. Aculab, Inc.*, 2019 WL 3532185, *3 (D. Del. 2019) (denying § 101 motion at Step One because defendant failed to propose an "abstract idea [that] satisfactorily captures the substance of the claims").

1. Alkane Overgeneralizes, And Thus Mischaracterizes, The Asserted Claims In An Effort to Frame Them As Abstract.

Contrary to Alkane's overgeneralizations, the claims are not directed to the idea of "utilizing gas to power computers," but rather to unconventional ways of mitigating natural gas flaring by using stranded natural gas to generate electricity that is consumed by a distributed computing system at the well site. As the patents explain, natural gas is "a low-value byproduct" of oil production, which often cannot be feasibly or economically transported from the well locations. '307 Patent at 1:30-41; *see also* ECF 69 at ¶ 25.[6] As a result, "well operators must either 'vent' or 'flare'" the natural gas byproducts. '307 Patent at 1:41-43; *see also* ECF 69 at ¶¶ 25-26. Although "flaring" (*i.e.*, the "controlled burning" of natural gas byproducts) was "designed to minimize the safety and environmental risks associated with venting" the gas byproducts into the atmosphere, at the time of the patents flaring had also given rise to "serious environmental and

[6] Since the specifications of the Asserted Patents are substantively identical, the specification citations herein are only to the '307 Patent.

health concerns." '307 Patent at 1:30-57; *see also* ECF 69 at ¶¶ 25-26. As a result, state and federal regulators implemented "strict regulations" that limited flaring, the violation of which could result in a "shut in" of the well. '307 Patent at 1:52-2:3.

The inventors recognized that "[s]tranded natural gas . . . represents a very low-cost power generation opportunity," and that there was a particular need for systems that could generate and consume electricity on-site given gas takeaway constraints.[7] *Id.* at 2:4-42. The inventors further recognized that energy-intensive "distributed computing"—cryptocurrency mining in particular—was a "potential solution to the [stranded] natural gas problem" because it "requires enormous amounts of power" and thus could consume large amounts of stranded natural gas on-site. *Id.* at 2:15-34; *see also* ECF 69 at ¶¶ 27-30. To that end, the claims recite unconventional systems and methods of mitigating natural gas flaring by using stranded natural gas to generate electricity that is consumed at the well site by a distributed computing system. *See* '307 Patent at 28:2-49. Alkane's overgeneralization of the claims fails to account for these aspects of the claims. *ChargePoint, Inc. v. SemaConnect, Inc.*, 920 F.3d 759, 767-68 (Fed. Cir. 2019) (highlighting the importance of the specification, including descriptions of the invention and "the problem facing the inventor," when considering what the claims are "directed to").

[7] Alkane contends the specification "notes that it was common practice prior to the invention for oil and gas operators to sell their natural gas for 'low-cost power generation.'" ECF 73 at 9. ***That is <u>not</u> true.*** While the specification acknowledges that "many oil and gas operators . . . readily offered their natural gas for low cost," the specification does not link the low-cost sale of stranded natural gas with power generation. '307 Patent at 2:9-14. Rather, the specification simply states that operators in "pipeline-constrained environments readily offer their natural gas for low cost . . . so that they can produce oil, which often represents the vast majority of a well's lifetime economics." *Id.*

Alkane also overgeneralizes the individual claim elements. Specifically, Alkane contends that the individual elements include "purely functional language" and thus are purportedly directed to achieving the result of "using natural gas to power computers" using "whatever structures or steps happen to work." ECF 73 at 6-7. But this argument is belied by the plain language of claim 1, which recites "an electrical power generation system" comprising the following ***specific structures***:

> (1) one or more "power generation modules," which must themselves be physically adapted to "receive a fuel gas" having "a heat value of at least about 1,000 Btu/scf," and "consume the fuel gas to generate a high-voltage electrical output," '307 Patent at 28:2-11;
>
> (2) "a parallel panel," which must be "in electrical communication with each of the power generation modules," and must be physically adapted to "receive the high-voltage output from each of the power generation modules" and "combine and synchronize [them] into a combined high-voltage electrical output," *id.* at 28:12-19; and
>
> (3) "an electrical transformation module," which must be "in electrical communication with the parallel panel," and must be physically adapted to "receive the combined high-voltage output" and "transform [it] into a low-voltage electrical output," *id.* at 28:20-29.

Whether the claims utilize "functional language" to define the physical structures included in the claimed system is of no moment, as it is both common and permissible to define a structural element by reference to the function it performs. *See*, *e.g.*, *In re Swinehart*, 439 F.2d 210, 212 (C.C.P.A. 1971); *In re Schreiber*, 128 F.3d 1473, 1478 (Fed. Cir. 1997).

Alkane attempts to further support its "lack of specificity" argument by pointing to the specification's alleged failure "to provide any technical details" for the claimed components. *See*

ECF 73 at 8.[8] The thrust of Alkane's argument, however, seems not to be the alleged lack of specificity in the specification,[9] but rather that the specification discloses the possibility of using known generators and/or computing components in the claimed system.[10] *See* ECF 73 at 9-10.

This argument is unavailing for two reasons. First, whether a claim element or combination of elements is "merely conventional and already well known" is an issue to be taken up in Step 2—not Step 1—of the *Alice/Mayo* analysis. Second, "[i]t is improper to analyze the claim as individual limitations." *Diamond v. Diehr*, 450 U.S. 175, 188-89 (1981); *King Pharms., Inc. v. Eon Labs, Inc.*, 616 F.3d 1267, 1277 (Fed. Cir. 2010) ("The Supreme Court has stated that a § 101 patentability analysis is directed to the claim as a whole, not individual limitations."). As explained below with respect to Step 2 of the *Alice/Mayo* analysis, when the asserted claims are considered ***as a whole***, it is plain that they recite an unconventional system for mitigating natural gas flaring

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[8] Alkane's reliance on *ChargePoint* to support this argument is misplaced. *See* ECF 73 at 8, 9-10. Despite Alkane's contrary implication, the holding in *ChargePoint* did not hinge on the level of "technical detail" provided in the specification. *Id.* at 8. Although the court noted the importance of the specification in considering what the claims are "directed to," it made clear that "any reliance on the specification in the § 101 analysis must always yield to the claim language," and the decision indeed hinged on the "breadth of the claim language." *ChargePoint*, 920 F.3d at 769.

[9] Regardless, the specification includes significant detail regarding each of the claimed components and how they are combined to form the claimed systems. *See id.* at 15:26-19:40 (describing the "electrical power generation system" and the components thereof); *id*. at 19:41-25:10 (describing the "distributed computing system" and the components thereof).

[10] Alkane's reliance on *Universal Secure Registry* to support this argument is misplaced. First, unlike the claims at issue here, the claims in that case related to "authentication technology," an area in which "patent eligibility often turns on whether the claims provide sufficient specificity to constitute an improvement to computer functionality itself." *Universal Secure Registry LLC v. Apple, Inc.*, 10 F4th 1342, 1346 (Fed. Cir. 2021). Because the claims did not do so, but instead used "a combination of conventional components in a conventional way to achieve an expected result," the court found the claims directed to an abstract idea. *Id.* at 1350. Here, although Alkane argues that the individual claim elements were "conventional," it has not—and indeed cannot on this record—demonstrate that the elements were combined in a conventional way to achieve an expected result. *See infra* at Section III.C.

by using stranded natural gas to generate electricity that is consumed at the well site by a distributed computing system. *See infra* at Section III.C.

2. Alkane's Preemption Argument Is Based On The Same Faulty Overgeneralization of The Claims.

Alkane further contends that, because of the alleged lack of specificity regarding the claimed structures, "the claims would largely preempt the use of a fuel gas stream to generate electricity to power distributed computing units." ECF 73 at 11. As an initial matter, Alkane's preemption argument cannot be squared with arguments advanced by Alkane in other filings in this case. For example, Alkane has argued that the accused systems do not infringe because they do not utilize the certain structures recited in the claims.[11] But if the claims were as broad as Alkane contends in its Motion (*i.e.*, the claims could be satisfied using any physical structure or step), the alleged absence of these specific physical structures in the accused systems would be irrelevant because Alkane would infringe so long as the accused systems "use . . . a fuel gas stream to generate electricity to power distributed computing units." ECF 73 at 11. Alkane cannot have it both ways.

Regardless, Alkane's preemption argument is based on the faulty premise that the asserted claims are directed to the abstract idea of "utilizing gas to power computers." As explained above, this alleged abstract idea fails to capture the substance of the claims—mitigating natural gas flaring

[11] *See* ECF 35 at 7-8 (asserting that the accused systems do not infringe because they allegedly do not include "'an electrical transformation module' (*i.e.*, a transformer)"); *see also* ECF 36 at ¶ 23 (Alkane's VP of Business Development asserting that the accused systems do not infringe because they include a different structure than the recited "parallel panel"); *id.* at ¶ 28 (asserting that the accused systems do not infringe because they do not include "data satellite antennas," but instead use a different structure for data communications); *id.* at ¶¶ 29-30 (asserting that the accused systems do not infringe because the structure of "Alkane's 'monitoring and control' system" is different than what is recited in certain asserted claims).

by using stranded natural gas to generate electricity that is consumed at the well site by a distributed computing system. *See supra* at Section III.B.1. In addition, Alkane's preemption argument disregards the specific physical components recited in the asserted claims. *See supra* at 10. It is beyond question that the asserted claims—which are directed to a specific flare-mitigation system comprised of the specific components recited in the claims—would not widely preempt all systems that "utilize[ ] stranded gas to power computers." *See, e.g.*, *Canrig Drilling Tech. Ltd. v. Trinidad Drilling L.P.*, No. H-15-0656, 2015 WL 5458576, at *1-4 (S.D. Tex. Sept. 7, 2015) (holding that claims reciting systems and methods for conducting directional drilling by "rotating a drill string to a predetermined angle" did not preempt directional drilling, or even computer-assisted directional drilling because they were directed to a specific "physical apparatus and drilling process").

In sum, Alkane's alleged "abstract idea" is based on an overgeneralization of what the claims are purportedly "directed to," and thus fails to capture the substance of the claims. Because eligibility determinations require engagement with the claim language itself—rather than a reconstructed overgeneralization—Alkane's Motion should be denied. *See Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1337 (Fed. Cir. 2016).

C. Alice/Mayo Step 2: The Asserted Claims Recite Inventive Concepts.

Alkane erroneously contends that because some of the ***individual elements*** recited in the asserted claims were allegedly well-known, the asserted claims therefore do not contain an inventive concept. As explained below, however, Alkane's contention that some individual elements were well-known is legally and factually insufficient to demonstrate that the claims lack an inventive concept. Regardless, the specification of the Asserted Patents demonstrates that the

asserted claims recite an inventive concept at least because they recite an unconventional flare-mitigation system.

As a legal matter, even if Alkane had shown that ***every*** element of the asserted claims was well-known and conventional—and it has not—that would still be insufficient. "The inventive concept inquiry requires more than recognizing that each claim element, by itself, was known in the art." *Bascom Global Internet Services v. AT&T Mobility*, 827 F.3d 1341, 1350 (Fed. Cir. 2016). This is so because "[t]he 'inventive concept' may arise in one or more of the individual claim limitations ***or in the ordered combination of the limitations***." *Id*. Thus, even if every individual element is shown to be conventional, an inventive concept can nonetheless be found in the "arrangement of known, conventional pieces." *Id.* Alkane not only fails to address ***each individual element***—instead focusing on the alleged conventionality of two claim elements—but also fails to address whether the claimed ***combination*** was conventional. *See* ECF 73 at 9, 12 (addressing only the alleged conventionality the claimed "power generation modules" and "distributed computing units"). Accordingly, Alkane's arguments are legally insufficient to resolve the question of whether the asserted claims recite an inventive concept. *Bascom*, 827 F.3d at 1349-50.

Alkane's contentions are also factually insufficient. As stated above, whether a claim recites an "inventive concept" is a factual question and requires evaluation of whether the claim elements (individually or as a combination) were "well-understood, routine and conventional to a skilled artisan in the relevant field" at the time of the patent. *See supra* at 2-3 (quoting *Berkheimer*, 881 F.3d 1360, 1368 (Fed. Cir. 2018)). Alkane endeavors to answer that factual question for only two components recited in claim 1 of the '307 Patent: "power generation modules" and

"distributed computing units." *See* ECF 73 at 9, 12. Specifically, Alkane points to portions of the specification stating that known generators "may be employed in the power generation modules," *id.* at 9 (quoting '307 Patent at 16:24-25), and that conventional computing units may be "adapted" for use as "distributed computing units," *id.* at 9 (quoting '307 Patent at 5:7-47).[12] *See also id.* at 12 (citing the same specification passages). But Alkane has not identified—and the specification does not include—any disclosure that the remaining claim elements were conventional or well-known, much less any disclosure that it was well-known or conventional to combine and/or use the recited components in the manner called for by the claims.

To the contrary, the specification includes numerous factual assertions demonstrating that the asserted claims recite at least one inventive concept. Statements in a patent's specification are "routinely" relied on as "conclusive evidence" of an inventive concept. *See PPS Data*, 404 F. Supp. 3d at 1040 (citing the Federal Circuit's decisions in *Solutran, Inc. v. Elavon, Inc.*, 931 F.3d 1161, 1168 (Fed. Cir. 2019); *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat'l Ass'n*, 776 F.3d 1343, 1349 (Fed. Cir. 2014); and *Berkheimer*, 881 F.3d at 1370). As an example, in *Cooperative Entertainment, Inc.*, the district court granted a Rule 12(b)(6) motion based on the purported ineligibility of the asserted claims under § 101. 50 F.4th at 130. The Federal Circuit reversed, holding that statements in the specification concerning how the claimed invention "is different from and improves on the prior art" should be credited as evidence of an inventive concept. *Id.* at 131-33. The court explained that, "[a]t a minimum, the district court should have

[12] The only other portion of the specification cited by Alkane to support its conventionality allegations is a portion of the "background" section describing the stranded-natural-gas problem and the inventor's recognition that energy-intensive "distributed computing"—in particular, cryptocurrency mining—was a "potential solution." '307 Patent at 2:4-25; *see* ECF 73 at 12.

denied the motion to dismiss" because such statements in the patent's specification "create a plausible fact issue regarding the inventiveness of the [claimed invention]." *Id.* at 133; *see also Berkheimer*, 881 F.3d at 1370 (holding that statements in the specification regarding the shortcomings of prior systems gave rise to "a genuine issue of material fact" as to whether the asserted claims recited an inventive concept).

Here, as in *Cooperative Entertainment*, the specification of the Asserted Patents describes the claimed flare-mitigation systems as different from and providing specific advantages over conventional methods of disposing of stranded natural gas. For example, the specification explains that conventional methods were focused on flaring (*i.e.*, burning the stranded natural gas), but that practice "raised serious environmental and health concerns." '307 Patent at 1:22-59. In response, "various state and federal regulators [had] begun to take action" by implementing strict limitations on flaring, which gave rise to a need for alternative ways to dispose of stranded natural gas. *See id.* at 1:52-2:42. The specification explains that the claimed invention meets that need by providing an unconventional flare mitigation system that uses the stranded natural gas to generate electricity that is consumed by a distributed computing system at the well site, and thus avoids the high cost of transporting stranded natural gas from remote well sites via trucks or trains. *See* '307 Patent at 1:36-39 (stranded natural gas "often cannot be economically transported by trucks or trains from remote well locations"); *id.* at 2:35-42 (describing the need for systems to consume natural gas and the benefit of doing so "on-site").[13] Another benefit of the claimed flare mitigation system that is described in the specification is the ability to offset a portion of the "enormous amounts of

[13] *See also id.* at 25:15-64 (describing certain embodiments of the claimed flare mitigation systems being "deployed at a well site").

power" required by the distributed computing industry, and the cryptocurrency industry in particular. *Id.* at 2:15-42.[14]

The above-cited portions of the specification—which must be credited at the Rule 12(b)(6) stage—demonstrate that the asserted claims recite an inventive concept in the form of an unconventional flare-mitigation system that is both different from and provides benefits over conventional techniques of disposing of stranded natural gas. *Coop. Entm't*, 50 F.4th at 133 (crediting statements in the patent's specification as evidence of inventiveness because "all inferences [must be] drawn in favor of [the non-movant] . . . on a motion to dismiss"). Because the asserted claims include an inventive concept, Alkane's Motion should be denied.

To the extent the Court disagrees, however, the above-cited portions of the specification, at a minimum, give rise to a factual dispute as to whether the claimed flare-mitigation system (or the elements thereof) were well-known and conventional at the time of the patents. *See Coop. Entm't*, 50 F.4th at 131-32 (holding that defendant's motion to dismiss should have been denied because allegations of inventiveness in the complaint and similar statements in the patent's specification "create[d] a plausible factual issue regarding inventiveness"); *PSP Data*, 404 F. Supp. 3d. at 1041 (recognizing that "factual claims in the specification are sufficient to create a factual dispute"). The existence of such factual disputes are the very reason the Federal Circuit has cautioned that "dismissal for lack of patentable subject-matter" at the pleading stage should be "the exception, not the rule." *Ultramercial, Inc. v. Hulu, LLC*, 722 F.3d 1335, 1339 (Fed. Cir.

[14] Crusoe's complaint also includes factual allegations regarding these benefits. ECF 69 at ¶¶ 29-30.

2013), vacated on other grounds by *WildTangent*, *Inc*. *v*. *Ultramercial*, *LLC*, 134 S. Ct. 2870 (2014).

IV. CONCLUSION

To hold that a patent is directed to ineligible subject-matter at the Rule 12(b)(6) stage, "the ***only*** plausible reading of the patent must be that there is clear and convincing evidence of ineligibility." *Ultramercial*, 722 F.3d at 1339. For the reasons explained above, Alkane has not established ineligibility by clear and convincing evidence. First, Alkane's Motion is based entirely on a single asserted claim, which Alkane has not shown to be representative of any other asserted claim. Second, Alkane has not demonstrated that any claim is directed to an abstract idea because the alleged abstract idea advanced by Alkane fails to capture the substance of the asserted claims. Third, Alkane myopically focuses on portions of the specification describing certain previously known elements, while disregarding disclosures that affirmatively establish the non-conventionality of ***the combination of elements*** recited in the claims.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that on November 30, 2022 all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document (and the exhibit thereto) via the Court's CM/ECF system. Any other counsel of record will be served in accordance with the Federal Rules of Civil Procedure.

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