IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF TEXAS
HOUSTON DIVISION

C&M OILFIELD RENTALS, LLC D/B/A C-MOR ENERGY SERVICES,	§	
	§	
Plaintiff,	§	
	§	
V.	§	**CIVIL ACTION NO. 4:22-CV-00965**
	§	
ENSIGN US SOUTHERN DRILLING LLC,	§	
	§	
Defendant.	§	

ENSIGN'S SUPPLEMENTAL PRELIMINARY INVALIDITY CONTENTIONS

I. Introduction

Pursuant to Plaintiff's April 19 2023 invitation for Ensign to supplement and pursuant to the Southern District of Texas's Patent Local Rules 3-3 (*Preliminary Invalidity Contentions*) and 3-4 (*Document Production Accompanying Preliminary Invalidity Contentions*), Defendant Ensign US Southern Drilling LLC ("Ensign") hereby submits its Supplemental Preliminary Invalidity Contentions and Document Production.

Plaintiff served Ensign with Plaintiff's Disclosure of Asserted Claims and Preliminary Infringement Contentions for U.S. Patent Nos. 10,976,016 and 10,900,626 pursuant to P.R. 3-1 and 3-2, wherein Plaintiff alleged infringement of claims 1-2, and 23 of the '016 patent and claims 9 and 19 of the '626 patent. Ensign timely served its Preliminary Invalidity Contentions and Plaintiff invited Ensign to supplement those. The original Preliminary Invalidity Contentions and the Supplemental Invalidity Contentions are collectively referred to as "Preliminary Invalidity Contentions" or "Invalidity Contentions" unless the connotation suggests otherwise.

Ensign does not provide any Preliminary Invalidity Contentions regarding any claims not

asserted against Ensign. To the extent Plaintiff is permitted to assert additional claims against Ensign in the future, Ensign reserves all rights to disclose new or supplemental invalidity contentions regarding such claims.

In these Invalidity Contentions, with respect to each Asserted Claim, Ensign: (i) identifies each currently known item of prior art that either anticipates or renders obvious each Asserted Claim; (ii) specifies whether each such item of prior art anticipates or renders obvious the applicable claims; (iii) submits charts for illustrative prior art references identifying where each limitation of each Asserted Claim is disclosed or rendered obvious by the prior art; and (iv) identifies the grounds for invalidating the Asserted Claims based on enablement and/or written description under 35 U.S.C. § 112. Ensign reserves the right to supplement these Invalidity Contentions pursuant to the Federal Rules of Civil Procedure, the Court's Local Rules, or any other order or schedule entered by the Court.

II. General Statements and Objections

Ensign's Preliminary Invalidity Contentions are based on Ensign's knowledge, understanding, and belief as to the facts and information available as of the date of these Preliminary Invalidity Contentions. Discovery in the case is proceeding and Ensign has not yet completed their investigation, collection of information, discovery, or analysis relating to this action, and additional discovery may require Ensign to supplement or modify these contentions. For example, Plaintiff has not produced all of the information relevant to Ensign's counterclaims and defenses. For these and other reasons, including those set forth below, Ensign reserves the right to further supplement or alter the positions taken and information disclosed in these Preliminary Invalidity Contentions including, without limitation, the prior art and grounds of invalidity set forth herein, to take into account information or defenses that may come to light as a result of these continuing efforts. Ensign

further reserves the right to introduce and use such supplemental materials at trial.

Ensign provides the information below and in the attached claim charts, as well as the accompanying document production, in a good faith effort to comply with the Local Rules and the Court's Scheduling Order. Ensign reserves the right to amend, modify, and/or supplement these Preliminary Invalidity Contentions. In addition, Ensign reserves the right to prove the invalidity of the Asserted Claims on bases other than those required to be disclosed in these Preliminary Invalidity Contentions.

A. Plaintiff's Infringement Contentions

These Preliminary Invalidity Contentions are made in response to Plaintiff's Infringement Contentions. Should Plaintiff modify any assertion or contention in Plaintiff's Infringement Contentions, Ensign reserves the right to supplement or otherwise amend these Preliminary Invalidity Contentions and the accompanying document production. Ensign notes that Plaintiff's Infringement Contentions are deficient in a number of respects, including without limitation, relying on allegations made upon insufficient evidence, incorrect reasoning, and positions in direct conflict with the plain meaning of the claims. By setting forth their Preliminary Invalidity Contentions in response to Plaintiff's Infringement Contentions, Ensign does not waive their objections to Plaintiff's deficient Infringement Contentions, nor do Ensign's Preliminary Invalidity Contentions acquiesce to or implicitly agree with any of the reasoning, analysis, conclusions, or other basis set forth in Plaintiff's Infringement Contentions.

B. Claim Construction

The Court has not yet construed the Asserted Claims of either patent. Ensign reserves the right to identify other prior art or to supplement these Preliminary Invalidity Contentions because Ensign's position on invalidity of certain claims may depend on how those claims are construed by the Court. Ensign's Preliminary Invalidity Contentions are based, at least in part, on their present

understanding of the Asserted Claims and/or their present understanding of the claim constructions Plaintiff appears to be using—based on Plaintiff's Infringement Contentions— whether or not Ensign agrees with such claim constructions.

To the extent that these Preliminary Invalidity Contentions reflect constructions of claim terms that may be consistent with or implicit in Plaintiff's Infringement Claim Charts, no inference is intended or should be drawn that Ensign agree with such claim construction(s). Ensign takes no position on any matter of claim construction in these Preliminary Invalidity Contentions. Any statement herein describing or tending to describe any claim element is provided solely for the purpose of understanding the relevant prior art. Ensign expressly reserves the right to propose any claim construction they consider appropriate and/or to contest any claim construction they consider inappropriate. Indeed, Ensign may disagree with Plaintiff's interpretation of the meaning of many terms and phrases in the Asserted Claims.

Similarly, nothing stated herein shall be treated as an admission or suggestion that Ensign agree with Plaintiff regarding either the scope of any of the Asserted Claims or the claim constructions advanced directly or implicitly by Plaintiff. Additionally, nothing in these Preliminary Invalidity Contentions shall be treated as an admission that any accused product meets any limitations of any of the Asserted Claims.

Ensign anticipates the Court's construction of claim terms may significantly affect the scope of the Asserted Claims. Therefore, Ensign reserves the right to supplement or modify these Preliminary Invalidity Contentions based upon any future claim construction ruling.

C. Ongoing Discovery and Disclosures

Ensign provides these Preliminary Invalidity Contentions as provided for in the Scheduling Order in this matter. Discovery in this case is ongoing, however, and Ensign's investigation, including Ensign's search for prior art, is ongoing. Ensign therefore reserves the right to further

supplement or alter the positions taken and information disclosed in these Preliminary Invalidity Contentions including, without limitation, the prior art and grounds of invalidity set forth herein, to take into account information or defenses that may come to light as a result of these continuing efforts. Ensign hereby incorporates by reference the testimony of any fact witnesses that are deposed, that provide declarations, or that otherwise testify in this lawsuit or related lawsuits such as the Apollo and Nabors lawsuits with C&M. Ensign also hereby incorporates by reference the forthcoming reports and testimony of Ensign's expert witnesses regarding invalidity of the patents. Ensign incorporates and reserves the right to rely upon any and all prior art references and/or other invalidity or unenforceability defenses or claims asserted in the Apollo or Nabors pleadings, the Apollo or Nabors Invalidity Contentions, or in the Apollo or Nabors expert reports in the cases of *C&M v. Apollo Lighting*, Case No.21-cv-00544, Western District of Texas, Waco Division and/or *Nabors v. C&M*, Case No. 4:22-cv-02140. Southern District of Texas, Houston Division. In addition, Ensign reserves the right to rely upon any invalidity defenses asserted and/or raised in any USPTO proceeding including, but not limited to, any *inter parte review* petition involving any asserted patent.

Ensign bases these Preliminary Invalidity Contentions on their current knowledge and understanding of the Asserted Claims, Plaintiff's Infringement Contentions, the prior art, and other facts and information available as of the date of these contentions. Ensign has not yet completed their investigation, collection of information, discovery, or analysis relating to this action, and additional discovery may require Ensign to supplement or modify these contentions. For example, Plaintiff has not produced all of the information relevant to Ensign's claims, counterclaims and defenses. Ensign therefore reserves the right to further supplement or alter the positions taken and information disclosed in these Preliminary Invalidity Contentions including, without limitation, the prior art and grounds of invalidity set forth herein, to take into account information or defenses that

may come to light as a result of these continuing efforts. Ensign further reserves the right to introduce and use such supplemental materials at trial.

Both asserted patents are subject to post-AIA law because the earliest potential priority date is March 15, 2018. However, the '016 and '626 patents are not entitled to any date of invention earlier than their respective effective filing date or a filing date of a parent application. "For a patent to claim priority from the filing date of its provisional application, it must satisfy 35 U.S.C. § 119(e)(1)." *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). Specifically:

> the specification of the provisional must 'contain a written description of the invention and the manner and process of making and using it, in such full, clear, concise, and exact terms,' 35 U.S.C. § 112 ¶1, to enable an ordinarily skilled artisan to practice the invention claimed in the non-provisional application. *New Railhead Mfg., LLC v. Vermeer Mfg. Co.*, 298 F.3d 1290, 1294 (Fed. Cir. 2002).

Ensign objects to Plaintiff alleging or providing evidence of any earlier date of invention. To the extent Plaintiff is able and permitted to assert an earlier date of invention for any of the Asserted Claims, Ensign further reserves their right to supplement, modify, and/or amend these Preliminary Invalidity Contentions and their identification and production of prior art.

Further, Ensign expects to take discovery on public use and/or the on-sale bar under 35 U.S.C. § 102(a), additional prior art under 35 U.S.C. §§ 102 and 103, improper inventorship and/or derivation, earlier invention by other parties under 35 U.S.C. § 102, and/or applicant's failure to comply with 35 U.S.C. §§ 101, 112, and its duty of disclosure. Ensign therefore reserves all rights to further supplement or amend these Preliminary Invalidity Contentions if and when further information becomes available.

D. Prior Art Identification and Citation

Ensign identifies portions of prior art references that disclose the elements of the Asserted Claims. Although Ensign has identified at least one citation per element for each reference charted or otherwise discussed herein, each and every disclosure of the same element in said reference is not necessarily identified. In an effort to focus the issues, Ensign identifies only limited portions of the

cited references and documents produced. It should be recognized that a person of ordinary skill in the art (POSA) would review a photo and/or read a prior art reference as a whole and in the context of other publications, literature, and general knowledge in the field. To understand and interpret any specific statement or disclosure in a prior art reference, a person of ordinary skill in the art would rely upon other information including their common sense, common knowledge, and other publications and general scientific or engineering knowledge.

Ensign therefore reserves the right to rely upon other portions of the prior art references not specifically cited herein, as well as on other publications and expert testimony to provide context and to aid understanding and interpretation of the identified portions. Ensign also reserves the right to rely upon other prior art references, other publications, and the testimony of experts to establish that the alleged inventions would have been obvious to a person of ordinary skill in the art, including on the basis of modifying or combining certain cited references. Ensign also reserves the right to rely upon any admissions relating to prior art in the ’016 and/or ’626 patents or their respective prosecution histories or in other proceedings.

Where Ensign identifies a particular figure in a prior art reference, the identification should be understood to encompass the caption and description of the figure as well as any text relating to the figure in addition to the figure itself. Similarly, where an identified portion of text refers to a figure or other material, the identification should be understood to include the referenced figure or other material as well.

E. Reservation of Rights

Ensign reserves all rights to further supplement or modify these Preliminary Invalidity Contentions, including the prior art disclosed and stated grounds of invalidity, pursuant to the Court’s Local Rules and the Scheduling Order in this matter. In addition, Ensign reserves the right to prove the invalidity of the Asserted Claims on bases other than those required to be disclosed in these

Preliminary Invalidity Contentions and accompanying document production.

III. Invalidity Contentions Under 35 U.S.C. § 102 and/or § 103

Each Asserted Claim is invalid for lack of novelty under 35 U.S.C. § 102 and/or for obviousness under 35 U.S.C. § 103. The prior art cited herein and/or produced in the accompanying production discloses all the limitations of the Asserted Claims, explicitly, implicitly, and/or inherently, and along with related art and/or POSA knowledge that may also be relied upon to show the state of the art in the relevant time frames. Ensign has produced documents and/or identified exemplary portions of the prior art disclosing the claimed limitations. The prior art and POSA knowledge, however, may contain additional support for particular claim limitations. Ensign expressly reserves the right to rely on uncited portions of the prior art, other documents, and expert testimony to provide context or to aid in the understanding of the cited portions of the prior art. Where Ensign identifies a particular figure in a prior art reference, the identification should be understood to encompass the caption and description of the figure as well as any text relating to the figure in addition to the figure itself. Similarly, where an identified portion of text refers to a figure or other material, the identification should be understood to include the referenced figure or other material as well.

Ensign has provided accompanying exemplary charts for the ’016 and ’626 patents and associated document production. Individual claim charts illustrate where each element of each Asserted Claim can be found in each item of the listed prior art. To the extent one might argue that any reference identified in the Charts does not disclose every aspect of an element, the reference still anticipates or renders obvious alone, or in combination, the Asserted Claim(s) because any such aspect of an element is inherently disclosed or would have been obvious to one skilled in the art. Further, by mapping the claim language of the ’016 and ’626 patents to the representative references, Ensign does not imply or admit that the claim language satisfies Section 112 of the Patent Act or

that the claim language has patentable weight.

The cited prior art could and/or would be combined and modified in a number of ways to meet the Asserted Claims. It should also be recognized that a person of ordinary skill in the art would generally read a prior art reference as a whole and in the context of other publications, literature, and general knowledge in the field. To understand and interpret any specific statement or disclosure in a prior art reference, a person of ordinary skill in the art would rely upon other information including other publications and general scientific or engineering knowledge or common sense. Ensign therefore reserves the right to rely upon other portions of the prior art references not specifically cited herein and on other publications and expert testimony to provide context and to aid understanding and interpretation of the identified portions. Ensign also reserves the right to rely upon other prior art references, other publications, and the testimony of experts to establish that the alleged inventions would have been obvious to a person of ordinary skill in the art, including on the basis of modifying or combining certain cited references.

Ensign is not aware of how Plaintiff may attempt to distinguish the prior art cited herein, and thus reserves the right to identify other prior art or known information that would have supplied the allegedly missing elements to render the Asserted Claims obvious or to present negative alleged evidence of secondary indicia of non-obviousness. Plaintiff has not identified what limitations of the Asserted Claims they allege were not known to one skilled in the art at the time of the alleged invention recited in the Asserted Claims. For any claim limitation that Plaintiff alleges is not disclosed in a prior art reference, Ensign reserves the right to assert that such limitation is either inherent in the reference or would have been obvious to one skilled in the art in light of the same, or that the limitation is already known or disclosed in one or more pieces of prior art and in combination would have rendered the Asserted Claims obvious.

The suggested obviousness combinations are in the alternative to Ensign's Invalidity

Contentions based on anticipation. The obviousness contentions set forth herein should not be construed to suggest that any prior art is not anticipatory by itself. Ensign reserves the right to rely on any identified and/or produced piece of prior art and/or common knowledge and/or other information to anticipate all of the Asserted Claims and/or to render obvious all of the Asserted Claims in view of the knowledge of one having ordinary skill in the art or in combination with other pieces of prior art.

Ensign reserves the right to rely upon any admissions relating to prior art by Plaintiff's witnesses in this or other cases, in the Asserted Patents or their prosecution histories, and the prosecution histories of related patents/applications. Ensign also reserves the right to rely upon any related patents and patent applications, patents and patent applications incorporated by reference, foreign counterparts of the U.S. patents identified in these Preliminary Invalidity Contentions, U.S. counterparts of foreign patents and foreign patent applications identified in these Preliminary Invalidity Contentions, or U.S. and foreign patents and patent applications corresponding to articles and publications identified in these Preliminary Invalidity Contentions. For prior art patents and publications identified in these Preliminary Invalidity Contentions, Ensign reserves the right to rely on the public use, public availability, offer for sale, and/or sale of the products described in those prior art patents or publications once Ensign has had a full opportunity to take discovery on these subjects.

Moreover, prior art not included in these Preliminary Invalidity Contentions may become relevant depending upon the positions Plaintiff asserts, the claim constructions adopted by the Court, and the priority dates given the Asserted Patents. In addition, discovery is ongoing and Ensign has not had the opportunity to complete discovery in the present action. As a result, Ensign may uncover additional prior art and/or relevant information. Ensign reserves the right to supplement, modify, or amend these Preliminary Invalidity Contentions with additional prior art, or different versions of the prior art listed herein, as discovery continues in light of information provided by Plaintiff concerning

its infringement allegations, priority dates of the Asserted Patents, or in light of the Court's claim construction or other rulings and orders.

Finally, citations from the listed references are not a ratification or acceptance of the manner in which Plaintiff applies particular claim elements to the features and functions of the accused products. The citations are instead intended to demonstrate that, if certain claim elements are applied against the prior art in the same manner as Plaintiff applies them in their Infringement Contentions, then certain prior art discloses those claim elements to the same extent. The prior art may also disclose these same claim elements if the claim elements are applied differently than in the Infringement Contentions. Nothing in these Preliminary Invalidity Contentions is in any way an admission that the Infringement Contentions correctly describe the scope of the '016 or '626 patents or that Ensign infringes the '016 or '626 patents.

Ensign reserves the right to amend, modify, or supplement these Contentions to include additional prior art under 35 U.S.C. § 102 and/or 103 and/or other equitable defenses, as discovery in this action and Ensign's investigation proceeds. In addition, Ensign reserves the right to assert additional invalidity grounds under 35 U.S.C. §§ 101, 102, 103, 112, and/or other equitable defenses to the extent they are already not disclosed herein and discovery and further investigation yield information forming the basis of such invalidity.

A. Identification of Prior Art

Each of the Asserted Claims is anticipated and/or rendered obvious by prior art. Pursuant to the local patent rules and subject to the Ensign's reservations of rights set out herein, Ensign identifies the references on which it may rely as invalidating one or more of the asserted claims of the '016 or '626 Patent. That is, in the attached invalidity claim charts and/or produced documents Ensign relies upon the prior art listed wherein prior art patents are "identified by number, country, and date of issue" (3-3(a)(1)); prior art publications are "identified by title, date of publication, and,

author and publisher when feasible" (3-3(a)(2)); and prior art under 35 USC 102(a)(1) specifies the "the item offered for sale, in public use, or otherwise available to the public, the date the offer or use took place or the claimed invention was made available, and the identity of the person or entity that made the use or which made or received the offer, or the person or entity that made the claimed invention available or to whom it was made available" ((3-3(a)(3)(B)). Pursuant to the local rules (3-4(b)), Ensign has produced a copy of each item of prior art, including any required English translations, which copy contains the aforementioned 3-3 requirements. And Ensign has produced additional prior art and photos showing, for example, the state of the art upon which it may rely upon to demonstrate the state of the prior art and/or common sense and/or information generally known to those skilled in the art prior to the patent filings.

In addition to the charted and produced references, Ensign identifies the references incorporated by reference in the charted and produced references, the references cited on the face of the '016 and '626 patents, the admitted prior art in the specifications of the '016 and '626 patent, the background in each asserted patent, the prosecution history of the '016 and '626 patents, and/or the prosecution history of any related patents/applications or foreign counterpart. Ensign also reserves the right to rely upon foreign counterparts of the U.S. patents identified above; U.S. counterparts of foreign patents and foreign patent applications identified above; U.S. and foreign patents and patent applications corresponding to articles and publications identified above; and any systems, products, or prior inventions that relate to any references identified above.

Ensign further incorporates by reference the prior art references related to the '016 and '626 patents, including without limitation all prior art produced by or otherwise known to Plaintiff and all prior art known to the named inventors, any past or current owner, or any individual substantively involved in the prosecution of the '016 and '626 patents. In addition, Ensign incorporates by reference any expert reports, invalidity contentions, identified prior art, invalidity claim charts or

defense disclosed at any date by any party to any other litigation or U.S. Patent & Trademark Office proceeding involving the ’016 and ’626 patents or any related patent, including all references, declarations, pleadings, expert reports, deposition transcripts, and other materials submitted in the cases *C&M v. Apollo Lighting*, Case No.21-cv-00544, Western District of Texas, Waco Division and/or *Nabors v. C&M*, Case No. 4:22-cv-02140. Southern District of Texas, Houston Division. In addition, Ensign reserves the right to rely upon any invalidity defenses asserted and/or raised in any USPTO proceeding including, but not limited to, any *inter parte review* petition involving any asserted patent. The Petition, Declaration, and all exhibits from IPR2023-00804 filed by Ensign on March 30, 2023 including the various claim charts are specifically incorporated herein and included within the documents served with the Supplemental Invalidity Contentions.

Ensign contends that at least some of the systems and products disclosed in one or more of the prior art references identified here or in the attached charts are prior art under 35 U.S.C. §102(a). Ensign’s reference to any particular component, device, machine, or other product in these Invalidity Contentions should also be interpreted as a reference to the product itself and any corresponding patents, publications, or product literature cited here or in the attached charts that relate to the cited component, device, machine, or other product. Ensign does not yet have complete information regarding the dates by which some of the cited products were publicly disclosed, used, sold, or offered for sale, the circumstances under which the research, design, and development activities were conducted, and the identities of the particular individuals involved in such activities through publicly available patents, publications, and product literature. Ensign anticipates that the actual dates, circumstances, and identities of individuals will be the subject of third-party discovery during this lawsuit. Discovery is ongoing and Ensign reserves all rights to supplement its invalidity contentions accordingly.

A person of ordinary skill in the art would read a prior art reference as a whole and in the

context of other relevant publications, literature, and general knowledge in the field. To understand and interpret any specific statement or disclosure in a prior art reference, a person of ordinary skill in the art would also rely upon other information including other relevant publications and general scientific, engineering, or other relevant knowledge. Ensign reserves the right to rely upon the general scientific, engineering, or other relevant knowledge in the field in interpreting the disclosure of the prior art references. In addition, Ensign reserves the right to rely upon other relevant publications and on expert testimony to provide context and aid in the understanding of the prior art references. For example, Ensign reserves the right to rely on well- known prior art publications, such as relevant material and product specifications, to demonstrate the state of the art at the relevant time period. Ensign also reserves the right to rely upon other portions of the prior art references, other publications, and the testimony of experts to establish that the alleged inventions would have been obvious to a person of ordinary skill in the art, including the basis for modifying or combining the prior art references. Furthermore, Ensign reserves the right to rely upon any admissions relating to prior art found in the intrinsic evidence for the ’016 and ’626 patents.

Ensign may also rely on uncited portions of the prior art references, other publications, and the testimony of experts to establish that a person of ordinary skill in the art would have been motivated to modify or combine certain of the cited references so as to render the claim obvious. Where Ensign cites to a particular figure in a prior art reference, the citation should be understood to encompass the caption and description of the figure and any test relating to the figure in addition to the figure itself. Conversely, where a cited portion of text refers to a figure, the citation should be understood to include the figure as well. Ensign reserves the right to use other relevant references to establish how one of ordinary skill in the art would have understood the references to show anticipation or obviousness.

To the extent that one might argue, or the Court find, that any reference identified in the

accompanying claim charts does not explicitly disclose every aspect of an element, the reference still anticipates or renders obvious the Asserted Claim(s) because any such aspect of an element is inherently disclosed or would have been obvious to a person of ordinary skill in the art. For all of the reasons stated above and herein, Ensign reserves the right to supplement the charts and the tables, as appropriate.

Prior art not included in this disclosure, whether known or unknown to Ensign, may become relevant. In particular, Ensign is currently unaware of the extent, if any, to which Ensign will contend that limitations of the Asserted Claims of the ’016 and ’626 patents are not disclosed in the prior art that Ensign identifies, or that any of the identified references do not qualify as prior art under 35 U.S.C. § 102. The identification of any patents as prior art shall be deemed to refer to the application that was submitted for the same and to include identification of any foreign counterpart patents. To the extent that such an issue arises, Ensign reserves the right to identify additional teachings in the same references or in other references that anticipate or would have rendered the addition of the allegedly missing limitation to the device or method obvious.

B. Invalidity Claim Charts

In the attached claim charts, Ensign identifies prior art that alone, or in combination with the knowledge of one of ordinary skill in the art, or in combination with another reference, anticipates and/or renders obvious the limitations of the Asserted Claims of the Asserted Patents. For each Asserted Claim, Ensign’s contentions based on obviousness are raised in the alternative and should not be construed to suggest that any prior art reference included in a 35 U.S.C. § 103 combination is not invalidating prior art on its own. Thus, Ensign reserves the right to rely on any identified piece of prior art individually to anticipate all of the Asserted Claims and/or to render obvious the Asserted Claims in view of the knowledge of one having ordinary skill in the art at the time of the alleged

invention or in combination with any other identified piece of prior art.

Further, Ensign's claim charts submitted as part of these Preliminary Invalidity Contentions cite to particular exemplary teachings and disclosures of the prior art as applied to features of the Asserted Claims of the '016 and '626 patents. However, persons having ordinary skill in the art view an item of prior art in its entirety, including the context of other relevant publications, literature, products, common sense, and understanding. Accordingly, the cited portions are only examples, and Ensign reserves the right to rely on uncited portions of the prior art references and on other relevant publications and expert testimony as aids in understanding and interpreting the cited portions, as providing context thereto, and as additional evidence that a claim limitation is known or disclosed. Where Ensign cites to a particular figure in a reference, the citation should be understood to encompass the caption and description of the figure and any text relating to the figure.

Similarly, where Ensign cites to particular text referring to a figure, the citation should be understood to include the figure and caption as well. Ensign further reserves the right to rely on uncited portions of the prior art references, other publications, and testimony to establish bases for combinations of certain cited references that render the Asserted Claims of the '016 and '626 patents obvious. Further, for any combination, Ensign reserves the right to rely additionally on information generally known to those skilled in the art and/or common sense.

C. Anticipation / Obviousness

Ensign contends that each prior art reference discussed in the claim charts or produced documents, either alone or in combination with other above-identified references, renders the Asserted Claims of the '016 and '626 patents invalid as anticipated or obvious. In addition, each reference identified above may be combined with (1) information known to persons skilled in the art at the time of the alleged invention, and/or (2) any other reference identified herein o produced

to render the Asserted Claims of the ’016 and ’626 patents invalid as obvious.

In determining whether a claim is obvious, “[o]ften, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 418 (2007). In that regard, a patent claim may be obvious if the combination of elements was obvious to try or there existed at the time of the invention a known problem for which there was an obvious solution encompassed by the patent’s claims. The obviousness determination includes consideration of inferences and creative steps that a person of ordinary skill in the art might use. In addition, when a reference is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, 35 U.S.C. § 103 bars its patentability.

No showing of a specific motivation to combine prior art is required to combine the references and documents disclosed in the document production and in the attached charts, as each combination would have expected results, and, at most, would simply represent a known alternative to one of skill in the art. *See KSR* at 415-18 (2007) (rejecting the Federal Circuit’s “rigid” application of the teaching, suggestion, or motivation to combine test, instead espousing an “expansive and flexible” approach); *Q.I. Press Controls, B.V. v. Lee,* 732 F.3d 1371, 1379 (Fed. Cir. 2014). Indeed, the Supreme Court held that a person of ordinary skill is “a person of creativity, not an automaton” and “in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle.” *Id.* at 420-21; *see also* Examination Guidelines for Determining Obviousness Under 35 U.S.C. §103 in view of the Supreme Court Decision in *KSR International Co. v. Telefax Inc.*, 72 Fed. Reg. 57,526 (Oct. 10, 2007). Nevertheless, in addition to

the information contained elsewhere in these contentions, Ensign hereby identifies exemplary motivations and reasons to combine the references and known information as exemplified in the claim charts and document production.

One or more combinations of the prior art references identified in charts and/or produced information and/or common knowledge would have been obvious because these references would have been combined using: known methods to yield predictable results; known techniques in the same way; a simple substitution of one known, equivalent element for another to obtain predictable results; and/or a teaching, suggestion, or motivation in the prior art generally. *See Q.I. Press Controls*, 732 F.3d at 1379; *Randall Mfg. v. Rea*, 733 F.3d 1355, 1363 (Fed. Cir. 2013). In addition, it would have been obvious to try combining the prior art references identified above because there were only a finite number of predictable solutions and/or because known work in one field of endeavor prompted variations based on predictable design incentives and/or market forces either in the same field or a different one. *See KSR*, 127 S. Ct. at 1742; *Sanofi-Aventis Deutschland GmbH v. Glenmark Pharms. Inc., USA*, 748 F.3d 1354, 1360 (Fed. Cir. 2014); *Comaper Corp. v. Antec, Inc*., 596 F.3d 1343, 1352 (Fed. Cir. 2010); *In re Kubin*, 561 F.3d 1351, 1359 (Fed. Cir. 2009). Further, the combinations of the prior art references identified above and in the claim charts would have been obvious because the combinations represent known potential options with a reasonable expectation of success. *See InTouch Techs., Inc. v. VGO Comms., Inc*., 751 F.3d 1327, 1347 (Fed. Cir. 2014). Additional evidence that there would have been a motivation to combine the prior art references, produced documents, and/or common knowledge includes the interrelated teachings of multiple prior art references; the effects of demands known to the community or present in the marketplace; the existence of a known problem for which there was an obvious solution encompassed by the Asserted Claims; the existence of a known need or problem in the field of the endeavor at the time of the alleged invention(s); and the background knowledge, e.g., common knowledge, that would

have been possessed by a person having ordinary skill in the art. *See Norgren Inc. v. Int'l Trade Comm'n*, 699 F.3d 1317, 1322-23 (Fed. Cir. 2012); *Rolls-Royce, PLC v. United Techs. Corp.*, 603 F.3d 1325, 1339 (Fed. Cir. 2010); *Honeywell Int'l, Inc. v. U.S.*, 609 F.3d 1292, 1306-07 (Fed. Cir. 2010).

The motivation to combine common knowledge, the teachings of the prior art references disclosed here in the charts, and/or produced documents is also found in common knowledge, the references and/or produced documents themselves and in: (1) the nature of the problem being solved; (2) the express, implied and inherent teachings of the prior art; (3) the knowledge of persons having ordinary skill in the art; (4) the predictable results obtained in combining the different elements of the prior art; (5) the predictable results obtained in simple substitution of one known element for another; (6) the use of a known technique to improve similar devices, methods, or products in the same way; (7) the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; (8) the finite number of identified predictable solutions that had a reasonable expectation of success; and (9) known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

Any reference or combination of references and/or common knowledge that anticipates or makes obvious an asserted independent claim also makes obvious any Asserted Claim dependent on that independent claim because every element of each dependent claim was known by a person of ordinary skill at the time of the alleged invention, and it would have been obvious to combine those known elements with the independent claims at least as a matter of common sense and routine innovation. The motivation and/or incentive to combine each of the prior art references identified in the accompanying charts comes from many sources, including, but not limited to, the known, published prior art references and products themselves, the knowledge of those of ordinary skill in the

art, the common field of technology of the references, the commonality of the objectives and purposes of the references, and the teachings in the references directed to solving the problems that the ’016 and ’626 patents were allegedly directed to solving.

Technical references, of course, are not the only factor to be considered in determining obviousness. “In many fields it may be that there is little discussion of obvious techniques or combinations, and it often may be the case that market demand, rather than scientific literature, will drive design trends. Granting patent protection to advances that would occur in the ordinary course without real innovation retards progress and may, in the case of patents combining previously known elements, deprive prior inventions of their value or utility.” *KSR* at 419. Here, the Asserted Claims are no more than obvious combinations of previously known elements to bring about expected or known results.

Accordingly, the teachings of the individual prior art references disclosed in these Preliminary Invalidity Contentions, combined with the industry knowledge of a person of ordinary skill in the art at the time of the alleged invention of the ’016 and ’626 patents would render obvious the Asserted Claims of the ’016 and ’626 patents. Provided below are additional examples of motivations to combine common knowledge and/or the various prior art references disclosed in these Preliminary Invalidity Contentions. These are only examples of the teachings, suggestions, motivations and/or reasons a person of ordinary skill in the art would have had to modify or combine the prior art noted in the charts and produced documents. Such teachings, suggestions, motivations, and/or reasons may also be further identified in the charts and produced documents with reference to disclosure of particular limitations. T he charts and produced documents describe example points in the prior art references and common knowledge at which a particular aspect of the claims is taught.

Each of these teachings noted in the charts, common knowledge, and/or produced documents

would teach, suggest, motivate, and/or provide a reason to a person of ordinary skill in the art to modify or combine prior art references in relation to lighting of rig sites. For these reasons and others, a person of ordinary skill in the art would have been motivated to combine any one of the prior art references listed in the charts, common knowledge, and/or produced documents, or herein, with one or more of those prior art references listed in the charts and produced documents.

1. Background, State of the Art, and/or Common Knowledge of a POSA as of C&M's Alleged Priority Date of its Patents

The following table summarizes some prior art that discloses early electrical lights including both incandescent lighting and energy efficient light emitting diodes (LED).

NO.	Filed AIA (35 U.S.C. § 102)	Published AIA (35 U.S.C. § 102)	Patent No., Publication No., Appl. No.	Description / Title	Assignee / Owner
1	1-04-1875	8-29-1876	U.S. Pat. 181,613 to Woodward et al.	Electric Light	Edison Electric
2	11-04-1878	1-27-1880	U.S. Pat. 223,898 to Edison	Electric-Lamp	Edison Electric
3	1/15/1931	6/27/1933	U.S. Pat. 1,915,967 to Bailey	Light Projector	General Electric
4	6/30/2010	1/12/2011	CN 101,943,354A	LED Light	
5	1/10/2017	7/18/2017	CN 206,338,693U to Deng, Y	LED Light	
6	6/28/2017	1/16/2018	CN 206,890,253U to Cai, T. et al.	LED Light	
7	7/31/2012	5/21/2015	US 2015/0138780 to Yoshizawa et al.	Illumination Device	Mitsubishi Chem. Corp.
8	7/10/2013	4/22/2014	U.S. Pat. 8,704,262 to Livesay et. Al.	Solid State Light Sources with Common Luminescent and Heat Dissipating Surfaces	Goldeneye, Inc.

Thus, the electric light bulb has existed in the prior art since as early as 1875, for providing illumination. While these references are not individually charted, these references are relied upon as establishing what would be background knowledge, state of the art knowledge, or common

knowledge to a POSA as of C&M's alleged priority date of its patents.

The following table summarizes some prior art that discloses elevated lighting systems including lighting towers:

NO.	Filed AIA (35 U.S.C. § 102)	Published AIA (35 U.S.C. § 102)	Patent No., Publication No., Appl. No.	Description / Title	Assignee / Owner
22	7/16/1970	10/3/1972	U.S. Pat. 3,696,241 to Meyer et al.	Light Fixture Tower	Meyer Mfg. Inc.
23	12/15/1969	12/24/1974	U.S. Pat. 3,856,639 to Rohn t al.	High-Level Light Tower with Light Lowering Device and Control Sys.	Rohm Mfg. Co
24	3/3/2004	6/14/2004	KR 2003/52881Y1 to	Elevating Light Tower	
25	4/28/2017	1/9/2018	CN 206,861,409U to Jiwen, Cen et al	LED High Pole Lamp	Tigerfire Guangzhou Lighting Tech Corp
26	2/18/2012	11/28/2012	CN 202,561,618U to Li, Lixiong	Elevation Type High-Pole Lamp	Anji Feiteng Lighting Co Ltd.
27	2/7/2012	6/27/2012	KR 101,160,558B1 to Pack, Chun Don et al.	Emergency Light System Using Solar & Wind Power and Light Tower	Chunil Co. Ltd.
28	2/20/2012	9/5/2012	CN 202,419,407U to Jinghai, Tan	Multi-Functional Acousto-Optical Tower for Recreational Piazza	Jinghai Tan
29	8/4/2017	9/29/2017	CN201710659084	Self-Locking Type Lifting Porject Lamp Tower	
30	9/23/1987	2/27/1990	U.S. Pat. 4,903,442 to Trommen	Mast for Measuring or Illumination Purposes	G.A.Pfleiderer GmbH & Co. KG
31	6/9/1988	6/26/1990	U.S. Pat. 4,937,717 to Betzvog, Jr.	Lighting System for Hazardous Areas	Betzvog, Jr.
32	10/28/1992	12/21/1993	U.S. Pat. 5,272,611 to Lai	Electrical Cord Assy for Illumination-Adjustable Lighting Fixture	Lai
33	5/20/1998	12/5/2000	U.S. Pat. 6,155,696 to Winton et al.	Lighting Assy Raised and Lowering Along Pole	NSI Enterprises, Inc.
34	3/22/2007	2/23/2010	U.S. Pat. 7,665,862 to Villard	LED Lighting Fixture	Cree, Inc.
35	2/25/2011	2/28/2017	U.S. Pat. 9,581,303 to Gordin et al.	Compact and Adjustable LED Lighting Apparatus and Method	Musco Corp
36	1/30/1905	5/2/1905	U.S. Pat. 788,707 to Coverstone	Light Tower	
37	1/18/2006	8/10/2006	US 2006/0176708 to Gordin et al.	Single Arm Mogul Mount for Sports Lighting Fixtures	Musco Corp
38	12/6/2005	9/4/2008	US 2008/0212329 to Duguay et al.	Assy of LED for Lighting Applications	
39	2/25/2011	8/30/2012	US 2012/0217897 to Gordin et al.	Compact and Adjustable LED Lighting Apparatus and Method	Musco Corp
40	5/20/1998	12/5/2000	U.S. Pat. 6,155,696 to Winton et al.	Lighting Assy Raised and Lowering Along Pole	NSI Enterprises, Inc.
41	8/29/2012	3/12/2014	CN 103,629,549A	Movable Lighthouse	
42	9/15/1982	5/22/1984	U.S. Pat. 4,450,507 to Gordin	Composite Photometric Method	Mycro-Group Co
43	8/21/1992	12/21/1993	U.S. Pat. 5,272,609 to Nelson	Portable Lighting Unit	Century Mft & Equip Inc.
44	1/18/2002	8/19/2003	U.S. Pat. 6,607,285 to Citron et al.	Light Adjustment Appratus	Genie Indus. Inc.
45	10/29/2008	5/8/2012	U.S. Pat. 8,172,438 to Konop	Low-Profile Colapsible Lighting System	Magnum Power Prods, LLC
46	5/6/2009	1/1/2013	U.S. Pat. 8,342,714 to Rea et al.	Mobile Lighting Apparatus	Stray Light Optical Tech.
47	5/6/2009	5/14/2013	U.S. Pat. 8,439,534 to Roe et al.	Mobile Lighting Apparatus	
48	4/28/2009	5/27/2014	U.S. Pat. 8,734,163 to Gordin et al.	Illumination Scheme Using a Mobile Lighting Eval. Sys	Musco Corp
49	4/16/2010	1/13/2015	U.S. Pat. 8,931,932 to Lipscomb et al.	Moisture Release Valve for an Outdoor Lightng Fixture	G.H.L. Int'l Inc., Magnum Power Prods
50	1/18/2002	7/24/2003	US 2003/0137840 to Citron et al.	Light Adjustment Appratus	
51	10/8/2007	6/5/2008	US 2008/0129543 to Lee	Portable Traffic Signaling Device	
52	10/20/2014	4/21/2016	US 2016/0109079 to McKinley et al.	Light Tower Assembly	McKinley Srvs. Equip., Inc.
53	11/13/2015	3/19/2019	U.S. Pat. 10,236,820 to Schmidt	Modular Photovoltaic Light and Power Cube	Daniel L. Robertson
54	11/23/2015	5/18/2017	US 2017/0141721 to Schmidt	Modular Photovoltaic Light and Power Cube	Daniel L. Robertson

These prior art patents and publications disclose the general concept of mounting lights, including LED lights, on elevated positions to provide illumination of the area there-below. For example, U.S. Patent No. 10,236,820 entitled *Modular Photovoltaic Light and Power Cube,* provides a telescoping lighting tower that was designed for "[c]onstruction" and "industrial operations" such as oil drilling wells. *See* U.S. Patent No. 10,236,820 at (1:16-20). While these references are not individually charted, these references are relied upon as establishing what would be background knowledge, state of the art knowledge, or common knowledge to a POSA as of

C&M's alleged priority date of its patents.

The following table summarizes some prior art lighting systems for illuminating drilling rigs for safer nighttime drilling activities in and around the well-site:

NO.	Filed AIA (35 U.S.C. § 102)	Published AIA (35 U.S.C. § 102)	Patent No., Publication No., Appl. No.	Description / Title	Assignee / Owner
9	9/9/1955	7/14/1959	U.S. Pat. 2,895,039 to Hutchison	Derrick Girth Light	Frank E. Hutchison
10	4/26/2007	8/2/2011	U.S. Pat. 7,988,343 to Palmisano, Jr.	Easy-Glide Offshore Ready Light Tower System	Lester J. Palmisano, Jr.
11	4/28/2008	10/30/2008	US 200/0266859 to Palmisano, Jr.	Easy-Glide Offshore Ready Light Tower System	Lester J. Palmisano, Jr.
12	7/15/2009	12/23/2009	CN 101,608,765A	Solar Photovltaic Generation System .. Petroleum Boring Tower	WUXI New Distric
13	7/29/2008	5/6/2009	CN 201,232,899Y	Safety Energy-Conserving Flameproof Lamp for Drilling Derrick	
14	12/11/2012	12/24/2013	U.S. Pat. 8,613,527 to Allen et al.	Frac Light 3000	A&P Support, Inc.
15			CN 203,336,518U	Metal Halide Overhead Support	
16			CN 203,215,413U	Novel Lighting Lamp Support on Petroleum Drilling Machine Site	
17	4/10/2013	9/25/2013	CN 203,214,012U	Visualization Device for Safe Operation	
18	4/8/2015	7/8/2015	CN 204,460,120U	For the Shot-Light Holder Device of Driller Control House	
19	6/17/2015	11/11/2015	CN 204,754,882U	Oil Field is Field Work Lighting Device for Well	
20	10/15/2019	6/19/2020	CN210,793,565U	Drilling Rig Mast Lights	
21	5/30/2013	12/17/2014	CN 104,214,723A	Derrick Lamp and Mounting Support Thereof	Shenzen Oceans King Lighting Engr. Co.

These lights installed on oil-drilling rigs were provided to illuminate the well-site for providing safter working conditions during night-time. For example, U.S. Patent No. 2,895,039, filed September 9, 1955, entitled *Derrick Girth Light,* describes the light on a drilling rig for providing necessary illumination for work around a drilling rig by providing a secure attachment device for lights in the drilling rig's derrick, sometimes called a mast. U.S. Patent No. 7,988,343 to Palmisano, Jr., entitled *Easy-Glide Offshore Ready Light Tower System,* discloses a telescoping, elevated lighting system for illuminating offshore drilling rigs for night-time operations. While these references are not individually charted, these references are relied upon as establishing what would be background knowledge, state of the art knowledge, or common knowledge to a POSA as of C&M's alleged priority date of its patents.

The following table summarizes some prior art lighting systems for installing on

NO.	Filed AIA (35 U.S.C. § 102)	Published AIA (35 U.S.C. § 102)	Patent No., Publication No., Appl. No.	Description / Title	Assignee / Owner
55	9/16/2013		CN 203442735U	Lamp Frame Structure and LED Lamp with Lamp Frame Structure	Jiangshu JinJin Lighting Co. Ltd.
56	2/27/2018	11/9/2018	CN 208071255U		
57	10/16/2003	4/21/2005	U.S. Pat. App. Publ. 2005/0083690A1 to Griffin	Horizontally and Vertically Adjustable Lighting System and Method	FarSight LLC
58	11/8/1993	9/3/1996	U.S. Patent No. 5,551,199 to Hayes et al.	Box Truss for Lights	
59	12/2/1987	8/29/1989	U.S. Patent No. 4,862,336 to Richardson et al.	Dimorphic Truss Unit	Morpheus Lights, Inc.
60	1/10/1994	7/11/1995	U.S. Patent No. 5,432,691 to Garrett et a.	Automated Truss Module with Deployment Mechanism	Vari-Lite, Inc.
61	11/27/2012	5/11/2016	CN 103836575A	Installation Support with Changeable Rotation Angle	Oceans King Lighting Sci. & Tech. Co. Ltd.
62	2/27/1988	9/7/1989	DE 3806241A1 to Rueschenbaum	Installation Device for Low-Voltage Luminaires	Rueschenbaum & Co KG Egon GmbH
63	1/26/1926	3/19/1929	U.S. Patent No. 1,706,215 to Davidson	Adjustable Coupling Means	Am. Safety Device Co.
64	11/29/1965	12/19/1967	U.S. Patent No. 3,358,952 to Burns	Ground Mounted Antenna Support	Burns, Loren D.
65	12/24/1984	6/17/2986	U.S. Patent No. 4,595,165 to Klingensmith et al.	Adjustable Anchoring Assembly	Aluminium Co. of Am.
66	2/15/1990	10/29/1991	U.S. Patent No. 5,060,435 to Bogdanow	Bracket for Support of Verticle Pole	Bogdanow, Anatol L.
67	3/3/1998	9/4/2001	U.S. Patent No. 6,283,425 to Liljevik	Mounting Bracket	Allgon AB
68	12/20/2002	7/27/2004	U.S. Patent No. 6,768,474 to Hunt	Antenna Mounting Assembly and Method	SPX Corp.
69	6/5/2002	12/11/2003	U.S. Patent No. 6,848,806 to Yoshida et al.	Indirector Light Fixture	Genlyte Thomas Group LLC
70	2/8/2007	8/2/2012	U.S. Patent No. 8,371,460 to Ghatikar et al.	Modular Panel Mounting Systems	3form, Inc.
71	12/18/2015	6/22/2017	U.S. Patent No. 9,976,298 to Bergman	Concealed Structural Post Fastening Device and Method	Bergman, Richard
72	2/22/2005	8/25/2005	U.S. Patent Publ. 2005/0184207 to Bertram III	Magnetic Bed-Rail Attachment Particularly Suited to Sterile Environments	Bertam III, Morton

handrails, brackets, and frame-type systems:

In sum, as demonstrated by the references above and/or by the document production and/or by the claim charts it was background knowledge, common knowledge, and/or simply the state of the art that would be known to a person of ordinary skill in the art (POSA) as of C&M's alleged priority date of the patents that:

- Plurality of lights were commonly used to illuminate wellsites;
- A plurality of lights were commonly attached to rigs including to the crown deck and/or to handrails;
- Lights were commonly mounted on mounting poles using, for example, brackets;
- Brackets were commonly used with, for example, bolts to attach one item to another such as a mounting pole to a crown deck and/or to a handrail; and
- Many items including mounting poles have been attached to handrails of a crown deck.

2. Motivations to Modify and/or Combine References

A person of ordinary skill at the time of the alleged inventions of the of the Asserted Patents had reason to combine or modify one or more of the references as charted, as in the produced documents, and/or in light of the knowledge of a person of ordinary skill in the art at the time of the alleged inventions and information in the prior art cited herein. For example, the references and/or other documents discussed herein, and/or charted and/or produced all relate to the same field of lighting, poles, brackets, and the like, and identify and address the same technical issues as the Asserted Patents, and suggest very similar if not identical solutions to the same issues—the developing of illumination or other systems on structures such as rigs. Thus, a person of ordinary skill in the art would have a reasonable expectation of success in using common knowledge alone and/or

combining the various disclosures of references with or without additional common knowledge depending on desired applications and properties of desired lighting systems. Exemplary claim charts are described briefly below.

3. Charts 1-7, Supplemental Charts, and IPR

Each cited prior art reference may be combined with one or more other prior art references to render obvious the Asserted Claims in combination, as explained in more detail below. The disclosures of these references may also be combined with information known to persons skilled in the art at the time of the alleged inventions, and understood and supplemented in view of the common sense of persons skilled in the art at the time of the alleged inventions, including any statements in the intrinsic records of the Asserted Patent and related applications.

A POSITA would have been motivated to combine the prior art cited in Charts 1-7 based on the nature of the problem to be solved, the teachings of the prior art, and the knowledge of a POSITA. The identified prior art references for each of the Asserted Patent, including portions cited in attached charts address the same or similar technical issues and suggest the same or similar solutions to those issues as the Asserted Claims. On such bases, for each claim, Ensign expressly intends to combine one or more prior art items identified in Charts 1-7 with each other to address any further contention from C&M that a particular prior art item supposedly lacks one or more limitations of an Asserted Claim. Ensign contends that each charted prior art item can be combined with other charted prior art items when a particular prior art item lacks or does not explicitly disclose a limitation or feature of an Asserted Claim. The suggested obviousness combinations described below are not to be construed to suggest that any reference included in the combinations is not anticipatory. Further, if C&M contends that any of the anticipatory prior art fails to disclose one or more limitations of the Asserted Claims, Ensign reserves the right to identify other prior art references that, when combined with the anticipatory prior art, would render the claims obvious despite an allegedly

missing limitation. Ensign will further specify the motivations to combine the prior art, including through reliance on expert testimony, at the appropriate later stage of this lawsuit.

Chart 1

- The patent, patent applications, and other publications in chart 1 are prior art under 35 U.S.C. §§ 102(a) and 103(a) with regard to both U.S. Patent No. 10,976,016 B2 (the ’016 patent) and U.S. Patent No. 10,900,626 B2 (the ’626 patent). The prior art can be used alone, combined with one another, and/or combined with common knowledge of a POSA as outlined above for the reasons above to arrive at every element of the asserted claims. Prior to C&M’s alleged ’016 and ’626 patent filing dates, light fixtures and other equipment as shown in the charts have been attached to, for example, handrails with mounting poles and/or brackets and/or bolts. Furthermore, crown deck lighting with modular lights has been known in the prior art since well before 2018. Thus, with or without using common knowledge outlined above a POSA would readily combine any one of the references that that show a particular claim limitation with any one or more of the other references that show a particular claim limitation for the obvious and predictable result of lighting a wellsite. A POSA would be prompted to make such a combination for the benefit of putting modular lighting on the crown deck of a rig. That is, a POSA would readily attach lights to a mounting pole on a crown deck and/or handrail because it would make the lights more accessible and easier to adjust. In addition, the use of mounting poles with brackets and bolts allows mounting or affixing the lights to differently configured, designed, or

configured crown decks, including those with or without handrails. Thus, the ’016 patent and the ’626 patents are invalid for being obvious.

Invalidity Chart 1 – Supplemental and Supplemental Chart 1A and 1B

- Invalidity Chart 1 – Supplemental and Supplemental Chart 1A and 1B provide an even more specific element-by-element basis for each of the charted references.
- The patent, patent applications, and other publications in the charts are prior art under 35 U.S.C. §§ 102(a) and 103(a) with regard to both U.S. Patent No. 10,976,016 B2 (the ’016 patent) and U.S. Patent No. 10,900,626 B2 (the ’626 patent). The prior art can be used alone, combined with one another, and/or combined with common knowledge of a POSA as outlined above for the reasons above to arrive at every element of the asserted claims. Prior to C&M’s alleged ’016 and ’626 patent filing dates, light fixtures and other equipment as shown in the charts have been attached to, for example, handrails with mounting poles and/or brackets and/or bolts. Furthermore, crown deck lighting with modular lights has been known in the prior art since well before 2018. Thus, with or without using common knowledge outlined above a POSA would readily combine any one of the references that that show a particular claim limitation with any one or more of the other references that show a particular claim limitation for the obvious and predictable result of lighting a wellsite. A POSA would be prompted to make such a combination for the benefit of putting modular lighting on the crown deck of a rig. That is, a POSA would readily attach lights to a mounting pole on a crown deck and/or handrail because it would make the lights more accessible and easier to adjust. In addition, the use of mounting poles with brackets and bolts allows mounting or affixing the lights to differently configured, designed, or configured crown decks, including those with or without handrails. Thus, the ’016

patent and the ’626 patents are invalid for being obvious.

Chart 2

- The Nabors’ Prior Art Drilling Rigs (Offered for Sale; In Public Use; and/or Otherwise Available to the Public: < 2003) are prior art under AIA 35 U.S.C. § 102(a)(1) with regard to both US 10,976,016 B2 (the ’016 patent) and US 10,900,626 B2 (the ’626 patent). The representative Nabors rig contains each and every element of each claim as shown in the charts. Therefore, the asserted claims of both the ’016 patent and the ’626 patent are invalid for being fully anticipated by the representative Nabors rig. To the extent that C&M argues that the representative Nabors rig is somehow missing a claim limitation, then common knowledge of a POSA as described above and/or as shown in the accompanying document production in combination with the representative Nabors rig would render the asserted claims of both the ’016 patent and the ’626 patent invalid as obvious. That is, a POSA would readily apply and combine common knowledge with the Nabors representative rig for the obvious and predictable result of lighting a wellsite. A POSA would be prompted to make such a combination for the benefit of putting modular lighting on the crown deck of a rig. That is, a POSA would readily attach lights to a mounting pole on a crown deck and/or handrail because it would make the lights more accessible and easier to adjust. In addition, the use of mounting poles with brackets and bolts allows mounting or affixing the lights to differently configured, designed, or configured crown decks, including those with or without handrails.

Invalidity Chart 2 – Supplemental

- Invalidity Chart 2 – Supplemental provides an even more specific element-by-element basis for each of the charted references.

- The Nabors' Prior Art Drilling Rigs (Offered for Sale; In Public Use; and/or Otherwise Available to the Public: < 2003) are prior art under AIA 35 U.S.C. § 102(a)(1) with regard to both US 10,976,016 B2 (the '016 patent) and US 10,900,626 B2 (the '626 patent). The representative Nabors rig contains each and every element of each claim as shown in the charts. Therefore, the asserted claims of both the '016 patent and the '626 patent are invalid for being fully anticipated by the representative Nabors rig. To the extent that C&M argues that the representative Nabors rig is somehow missing a claim limitation, then common knowledge of a POSA as described above and/or as shown in the accompanying document production in combination with the representative Nabors rig would render the asserted claims of both the '016 patent and the '626 patent invalid as obvious. That is, a POSA would readily apply and combine common knowledge with the Nabors representative rig for the obvious and predictable result of lighting a wellsite. A POSA would be prompted to make such a combination for the benefit of putting modular lighting on the crown deck of a rig. That is, a POSA would readily attach lights to a mounting pole on a crown deck and/or handrail because it would make the lights more accessible and easier to adjust. In addition, the use of mounting poles with brackets and bolts allows mounting or affixing the lights to differently configured, designed, or configured crown decks, including those with or without handrails.

Chart 3

- The Handrail Mounted Structures (Publicly Available: < 2018) and other rig lighting (Publicly Available: Jan. 6, 2014) are prior art under 35 U.S.C. §§ 102(a) and 103(a) with regard to both U.S. Patent No. 10,976,016 B2 (the '016 patent) and U.S. Patent No. 10,900,626 B2 (the '626 patent). The Handrail Mounted Structures and other rig

lighting shown in the charts also reflect what was common knowledge to a POSA prior to C&M's asserted priority date. A POSA would combine the Handrail Mounted Structures and the other rig lighting for the obvious and predictable result of modular lighting placed on a crown deck of a rig via mounting poles and brackets. Specifically, the Handrail Mounting Structures could be combined by placing the structures on a crown deck as depicted in the rig lighting shown in the charts. Furthermore, this combination is common sense and predictable because it improves the modularity of rig lighting in a predictable way. A POSA would be prompted to make such a combination for the benefit of putting modular lighting on the crown deck of a rig. That is, a POSA would readily attach lights to a mounting pole on a crown deck and/or handrail because it would make the lights more accessible and easier to adjust. In addition, the use of mounting poles with brackets and bolts allows mounting or affixing the lights to differently configured, designed, or configured crown decks, including those with or without handrails. Thus, the asserted claims of the '016 patent and the '626 patents are invalid for being obvious.

Chart 3 – Supplemental

- Chart 3 – Supplemental provides an even more specific element-by-element basis for each of the charted references.
- The Handrail Mounted Structures (Publicly Available: < 2018) and other rig lighting (Publicly Available: Jan. 6, 2014) are prior art under 35 U.S.C. §§ 102(a) and 103(a) with regard to both U.S. Patent No. 10,976,016 B2 (the '016 patent) and U.S. Patent No. 10,900,626 B2 (the '626 patent). The Handrail Mounted Structures and other rig lighting shown in the charts also reflect what was common knowledge to a POSA prior to C&M's asserted priority date. A POSA would combine the Handrail Mounted

Structures and the other rig lighting for the obvious and predictable result of modular lighting placed on a crown deck of a rig via mounting poles and brackets. Specifically, the Handrail Mounting Structures could be combined by placing the structures on a crown deck as depicted in the rig lighting shown in the charts. Furthermore, this combination is common sense and predictable because it improves the modularity of rig lighting in a predictable way. A POSA would be prompted to make such a combination for the benefit of putting modular lighting on the crown deck of a rig. That is, a POSA would readily attach lights to a mounting pole on a crown deck and/or handrail because it would make the lights more accessible and easier to adjust. In addition, the use of mounting poles with brackets and bolts allows mounting or affixing the lights to differently configured, designed, or configured crown decks, including those with or without handrails. Thus, the asserted claims of the '016 patent and the '626 patents are invalid for being obvious.

Chart 4

- The Apollo Halo Crown (Jan. 28, 2018) and the Nabors' Rig (Publicly Available: <2003) are prior art under 35 U.S.C. §§ 102(a) and 103(a) with regard to both U.S. Patent No. 10,976,016 B2 (the '016 patent) and U.S. Patent No. 10,900,626 B2 (the '626 patent). A POSA would combine the Apollo Halo Crown features and the Nabors' rig features as shown in the chart for the obvious and predictable result of placing and/or improving modular lighting placed on a crown deck of a rig. That is, a POSA would readily attach lights to a mounting pole on a crown deck and/or handrail because it would make the lights more accessible and easier to adjust. In addition, the use of mounting poles with brackets and bolts allows mounting or affixing the lights to differently configured, designed, or configured crown decks, including those with

or without handrails. Thus, the ’016 patent and the ’626 patents are invalid for being obvious.

Chart 4 – Supplemental, Supplemental Chart 4A, and Supplemental Chart 4B

- Chart 4 – Supplemental, Supplemental Chart 4A, and Supplemental Chart 4B provide an even more specific element-by-element basis for each of the charted references.
- The Apollo Halo Crown (Jan. 28, 2018) and the Nabors’ Rig (Publicly Available: <2003) are prior art under 35 U.S.C. §§ 102(a) and 103(a) with regard to both U.S. Patent No. 10,976,016 B2 (the ’016 patent) and U.S. Patent No. 10,900,626 B2 (the ’626 patent). A POSA would combine the Apollo Halo Crown features and the Nabors’ rig features as shown in the chart for the obvious and predictable result of placing and/or improving modular lighting placed on a crown deck of a rig. That is, a POSA would readily attach lights to a mounting pole on a crown deck and/or handrail because it would make the lights more accessible and easier to adjust. In addition, the use of mounting poles with brackets and bolts allows mounting or affixing the lights to differently configured, designed, or configured crown decks, including those with or without handrails. Thus, the ’016 patent and the ’626 patents are invalid for being obvious.

Chart 5

- The Nabors’ Rig (Publicly Available: <2003) and the Apollo Halo Crown (Public Sale: Jan. 28, 2018) are prior art under 35 U.S.C. §§ 102(a) and 103(a) with regard to both U.S. Patent No. 10,976,016 B2 (the ’016 patent) and U.S. Patent No. 10,900,626 B2 (the ’626 patent). A POSA would combine the Nabors’ rig and the Apollo Halo Crown for the obvious and predictable result of placing or improving modular lighting on a crown deck of a rig. That is, a POSA would readily attach lights to a mounting

pole on a crown deck and/or handrail because it would make the lights more accessible and easier to adjust. In addition, the use of mounting poles with brackets and bolts allows mounting or affixing the lights to differently configured, designed, or configured crown decks, including those with or without handrails. Thus, the ’016 patent and the ’626 patents are invalid for being obvious.

Chart 5 – Supplemental

- Chart 5 – Supplemental provides an even more specific element-by-element basis for each of the charted references.
- The Nabors’ Rig (Publicly Available: <2003) and the Apollo Halo Crown (Public Sale: Jan. 28, 2018) are prior art under 35 U.S.C. §§ 102(a) and 103(a) with regard to both U.S. Patent No. 10,976,016 B2 (the ’016 patent) and U.S. Patent No. 10,900,626 B2 (the ’626 patent). A POSA would combine the Nabors’ rig and the Apollo Halo Crown for the obvious and predictable result of placing or improving modular lighting on a crown deck of a rig. That is, a POSA would readily attach lights to a mounting pole on a crown deck and/or handrail because it would make the lights more accessible and easier to adjust. In addition, the use of mounting poles with brackets and bolts allows mounting or affixing the lights to differently configured, designed, or configured crown decks, including those with or without handrails. Thus, the ’016 patent and the ’626 patents are invalid for being obvious.

Chart 6

- WO2018/042348 (published March 8, 2018) and US2018/0187873 (effective filing date of January 3, 2018) are prior art under 35 U.S.C. §§ 102(a) and 103(a) with regard to both U.S. Patent No. 10,976,016 B2 (the ’016 patent) and U.S. Patent No. 10,900,626 B2 (the ’626 patent). Other items attached to crown deck handrails are

shown in, for example, prior art photos in Ensign document production and/or other claim charts reflect what was common knowledge to a POSA prior to C&M's asserted priority date. A POSA would combine WO2018/042348, US2018/0187873, and/or common knowledge as exemplified by prior art photos in Ensign document production and/or other claim charts for the obvious and predictable result of placing or improving modular lighting on a crown deck of a rig. That is, a POSA would readily attach lights to a mounting pole on a crown deck and/or handrail because it would make the lights more accessible and easier to adjust. In addition, the use of mounting poles with brackets and bolts allows mounting or affixing the lights to differently configured, designed, or configured crown decks, including those with or without handrails. Thus, the '016 patent and the '626 patents are invalid for being obvious.

Chart 6 – Supplemental

- Chart 6 – Supplemental provides an even more specific element-by-element basis for each of the charted references.
- WO2018/042348 (published March 8, 2018) and US2018/0187873 (effective filing date of January 3, 2018) are prior art under 35 U.S.C. §§ 102(a) and 103(a) with regard to both U.S. Patent No. 10,976,016 B2 (the '016 patent) and U.S. Patent No. 10,900,626 B2 (the '626 patent). Other items attached to crown deck handrails are shown in, for example, prior art photos in Ensign document production and/or other claim charts reflect what was common knowledge to a POSA prior to C&M's asserted priority date. A POSA would combine WO2018/042348, US2018/0187873, and/or common knowledge as exemplified by prior art photos in Ensign document production and/or other claim charts for the obvious and predictable result of placing or improving modular lighting on a crown deck of a rig. That is, a POSA would readily

attach lights to a mounting pole on a crown deck and/or handrail because it would make the lights more accessible and easier to adjust. In addition, the use of mounting poles with brackets and bolts allows mounting or affixing the lights to differently configured, designed, or configured crown decks, including those with or without handrails. Thus, the ’016 patent and the ’626 patents are invalid for being obvious.

Chart 7

- U.S. Patent No. 2,895,039 (Issued July 14, 1959) is prior art under 35 U.S.C. §§ 102(a) and 103(a) with regard to both U.S. Patent No. 10,976,016 B2 (the ’016 patent) and U.S. Patent No. 10,900,626 B2 (the ’626 patent). U.S. Patent No. 2,895,039 contains each and every element of each claim as shown in the charts and in the photos in Ensign production. Therefore, the asserted claims of both the ’016 patent and the ’626 patent are invalid for being anticipated U.S. Patent No. 2,895,039. To the extent that C&M argues that U.S. Patent No. 2,895,039 is somehow missing a claim limitation, then common knowledge of a POSA as described in the contentions and/or as shown in the accompanying document production in combination with U.S. Patent No. 2,895,039 would render the asserted claims of both the ’016 patent and the ’626 patent invalid as obvious. That is, a POSA would readily apply and combine common knowledge with U.S. Patent No. 2,895,039 for the obvious and predictable result of lighting a wellsite. A POSA would be prompted to make such a combination for the benefit of putting modular lighting on the crown deck of a rig. That is, a POSA would readily attach lights to a mounting pole on a crown deck and/or handrail because it would make the lights more accessible and easier to adjust. In addition or in the alternative, the use of mounting poles with brackets and/or bolts allows mounting or affixing the lights to

differently configured, designed, or configured crown decks, including those with or without handrails. Thus, the asserted claims of the ’016 patent and the ’626 patents are invalid for being obvious.

Chart 7 – Supplemental

- Chart 7 – Supplemental provides an even more specific element-by-element basis for each of the charted references.
- U.S. Patent No. 2,895,039 (Issued July 14, 1959) is prior art under 35 U.S.C. §§ 102(a) and 103(a) with regard to both U.S. Patent No. 10,976,016 B2 (the ’016 patent) and U.S. Patent No. 10,900,626 B2 (the ’626 patent). U.S. Patent No. 2,895,039 contains each and every element of each claim as shown in the charts and in the photos in Ensign production. Therefore, the asserted claims of both the ’016 patent and the ’626 patent are invalid for being anticipated U.S. Patent No. 2,895,039. To the extent that C&M argues that U.S. Patent No. 2,895,039 is somehow missing a claim limitation, then common knowledge of a POSA as described in the contentions and/or as shown in the accompanying document production in combination with U.S. Patent No. 2,895,039 would render the asserted claims of both the ’016 patent and the ’626 patent invalid as obvious. That is, a POSA would readily apply and combine common knowledge with U.S. Patent No. 2,895,039 for the obvious and predictable result of lighting a wellsite. A POSA would be prompted to make such a combination for the benefit of putting modular lighting on the crown deck of a rig. That is, a POSA would readily attach lights to a mounting pole on a crown deck and/or handrail because it would make the lights more accessible and easier to adjust. In addition or in the alternative, the use of mounting poles with brackets and/or bolts allows mounting or affixing the lights to differently configured, designed, or configured crown decks,

including those with or without handrails. Thus, the asserted claims of the ’016 patent and the ’626 patents are invalid for being obvious.

IV. Document production accompanying the preliminary invalidity contentions

Required documents have been produced. The plaintiff is invited to contact the undersigned to the extent it believes any required document is missing.

Dated: April 28, 2023

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that the foregoing document has been delivered to all counsel of record via electronic mail on April 28, 2023.

By: */s/ Neil Kelly*
Neil Kelly