

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ENSIGN US SOUTHERN DRILLING LLC,
Petitioner,

v.

C&M OILFIELD RENTALS, LLC
D/B/A C-MOR ENERGY SERVICES
Patent Owner.

Case No. IPR2023-00804
U.S. Patent No. 10,976,016

**DECLARATION OF DR. GARY WOOLEY IN SUPPORT OF
PATENT OWNER'S RESPONSE TO
PETITION FOR *INTER PARTES* REVIEW OF
U.S. PATENT NO. 10,976,016**

Exhibit 2006

I, Gary Wooley, declare as follows:

I. INTRODUCTION & QUALIFICATION

A. Engagement

1. My name is Gary R. Wooley, and I am over 18 years of age.
2. I have been retained on behalf of C&M Oilfield Rentals, LLC (“C&M” or “Patent Owner”) to prepare a declaration in support of the Patent Owner’s Response for *inter partes* review of U.S. Patent No. 10,976,016 (the “’016 Patent”). My firm is being compensated at an hourly rate of \$720 for my time working in this matter. My firm’s compensation is not contingent on my findings or the outcome of this proceeding. My firm and I have no financial interest in the ’016 Patent, Petitioners, Patent Owner, or the outcome of this matter.
3. Patent Owner has asked me to offer opinions regarding the ’016 Patent, including the patentability of claims 1, 2, and 23 (which I may refer to subsequently as the “Challenged Claims”) in view of the prior art identified and discussed in the Petition and the accompanying exhibits. This declaration sets forth the opinions I have reached to date regarding these matters.
4. This declaration briefly outlines my background and qualifications to provide my opinion, describes the technology at issue and background of the art, identifies materials I reviewed to prepare this declaration, and sets forth my understanding of the patent claims as my analysis regarding the application of the patent claims of the prior art provided to me. I reserve the right to supplement my

opinions in the future, to clarify responses where appropriate, and to take into account new information as it becomes available to me.

B. Qualifications

5. I am a Registered Professional Engineer in the state of Texas.

6. I received a Bachelor of Science in Mechanical Engineering from Louisiana State University in 1969. I received a Masters of Science in Engineering Mechanics from Louisiana State University in 1970. I received a Ph D. in Engineering Science from Louisiana State University in 1972 with minors in Applied Mathematics and Mechanical Engineering.

7. Early in my career I was an employee of four major oil and gas operating companies: Shell, Chevron, Exxon, and Arco.

8. I have participated in and been a member of professional organizations including the American Society of Mechanical Engineers, Society of Petroleum Engineers, American Petroleum Institute, and ASM.

9. Since 1978, I have served as a consultant for oil and gas operators, drilling contractors, service and supply companies, manufacturers, and others for onshore and offshore wells around the world.

C. Information Considered

10. My opinions are based on a review of the materials of record in this proceeding, including the '481 Patent and its prosecution history, and all exhibits

submitted by Petitioner and Patent Owner or otherwise referenced or cited in those submissions. In reaching my opinions, I have relied upon my general knowledge and experience in the field and also considered the viewpoint of a person having ordinary skill in the art (“POSITA” or “skilled artisan”) at the time of the filing date of the provisional application to which the ’016 Patent claim priority, i.e., March 15, 2018.

II. PERSON HAVING ORDINARY SKILL IN THE ART

11. I understand that Petitioner has proposed the following level of ordinary skill in the art:

A person of ordinary skill in the art (“POSITA”) would have had at least a bachelor’s degree in petroleum engineering, mechanical engineering, civil engineering, construction, architecture, or a similar degree with a year or more experience working on or around rigs, such as a drilling rig, where one or more lighting systems were used to illuminate the wellsite. Additional experience would substitute for lack of a formal degree.

Pet. at 19.

12. I am a POSITA according to Petitioner’s definition, as I have at least the amount of experience and education, as described in the Petition.

III. OVERVIEW OF THE ’016 PATENT

13. A POSITA would recognize that the ’016 Patent relates to a novel lighting system for use on drilling rigs. Ex. 1001, Abstract. These systems are

“critical to ensure continuous and safe operation of well sites.” *Id.*, 1:13-14. The ’016 Patent explains that, “[t]o ensure even and effective lighting of the well site, lighting systems have previously been installed on the uppermost portion of the drilling rig, also referred to as the ‘crown’ of the rig.” *Id.*, 1:14-17. According to the patent, “[p]rior art crown-mounted lighting systems developed for oil rigs are limited in several ways,” including that “[t]heir designs are complicated and designed for specific rigs or rig types” and, “[t]ypically, once they are designed for a particular rig or a particular type of rig, the lighting systems designs are limited and are not able to be adapted for other uses.” *Id.*, 1:17-22.

14. The patent further explains that “[p]rior art lighting systems for drilling rigs are fixed, monolithic structures that are typically crown or frame systems, with a single size and layout accommodating one type of light and rig.” *Id.*, 1:23-26. Thus, “they are heavy and typically require cranes along with multiple workers for installation, removal, and adjustments.” *Id.*, 1:27-28. For example, “[a] typical rig lighting frame system may require between 6 and 12 hours for installation.” *Id.*, 29-30. “Due to the high cost of operating a rig, any such delay is extremely inefficient for the operator of a wellsite.” *Id.*, 1:35-37. These inefficiencies “also increase the time required to be spent on maintaining these systems, which also increases safety risk.” *Id.*, 1:37-39.

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