

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

QD OXFORD UK LIMITED, and
QUANTUM DESIGN INTERNATIONAL INC.,

Petitioners,

v.

MAYBELL QUANTUM INDUSTRIES, INC.,

Patent Owner.

IPR2026-00291
U.S. Patent No. 12,313,320

DECLARATION OF KAREN DE LOS REYES, CPA, CMA, MBA

I, Karen De Los Reyes, hereby declare as follows:

1. I am the Vice President, of Information Technology (IT) and Mergers & Acquisitions (M&A) Integration at Quantum Design International, Inc.

2. I have personal knowledge of the matters stated in this declaration, and if called as a witness, I could and would competently testify to them.

3. Quantum Design International Inc. (“QD” or the “Company”) is a U.S.-based company founded in 1982 and headquartered in San Diego, California. For more than four decades, QD has been the global leader in cryogenic materials characterization instrumentation, providing advanced technology solutions to researchers in physics, quantum science, chemistry, biotechnology, materials science, and nanotechnology. QD’s pioneering cryogenic and superconducting technologies have been instrumental in advancing the measurement and understanding of the physical properties of materials.

4. Quantum Design’s corporate headquarters in San Diego encompasses approximately 120,000 square feet and includes research and development laboratories, warehouse facilities, manufacturing operations, and sales and service capabilities. QD employs approximately 260 employees in the United States and has maintained a longstanding commitment to research and development since its founding in 1982. The Company invests significant resources in design, development, testing, and enhancement of advanced scientific instrumentation and

related technologies. These research and development activities are conducted primarily from the Company's San Diego headquarters by a multidisciplinary team of highly skilled engineers, and scientists. This work takes place leveraging approximately 100 Ph.D.-level global employees. Over the last ten years the Company has invested approximately \$67 million in research and development in the United States, reflecting its sustained commitment to innovation and supporting its leadership position in advanced scientific instrumentation. The Company's U.S.-based operation is the principal center for executive leadership, strategic decision making, and the management of key business activities conducted throughout the QD global organization.

5. QD serves a 5,000+ global customer base that includes leading universities, industrial research centers, federally funded laboratories, and shared-user facilities. In the United States, its customers include many of the nation's most prestigious academic institutions, such as the Massachusetts Institute of Technology (MIT), Harvard University, the California Institute of Technology (Caltech), the University of California, Berkeley, Columbia University and Stanford University. These institutions have made substantial investments in QD technology, given the high value and technical sophistication of the technology. Stanford University alone operates more than 29 QD systems across its research programs, and the Company has installed over 1,300 of its systems throughout the United States.

6. QD instrumentation is also widely deployed throughout the U.S. national laboratory system and federal research agencies, including the National Institute of Standards and Technology (NIST), the National Institutes of Health (NIH), Brookhaven National Laboratory, Oak Ridge National Laboratory, Fermilab, the National High Magnetic Field Laboratory (National MagLab), and Los Alamos National Laboratories, among many others. In the private sector, QD systems support advanced research and metrology activities at numerous Fortune 500 companies, including IBM and Microsoft. The widespread adoption of QD instrumentation across academia, government, and industry reflects the company's position as the trusted standard for materials characterization, cryogenic measurement, and quantum research infrastructure.

7. QD instruments' award-winning patented technologies are widely recognized as the industry standard for magnetic, superconducting, low-temperature, and materials characterization measurements. Data generated by QD systems are cited in more peer-reviewed scientific publications than those produced by any other comparable platform in these fields. Each year, hundreds of scientific papers advancing materials science, condensed matter physics, superconductivity, and quantum technologies rely on measurements performed using QD instrumentation. The impact of QD's technology extends to the highest levels of scientific achievement. Researchers using QD systems include some of the world's most

distinguished scientists, among them eight Nobel Laureates in Physics and one Nobel Laureate in Chemistry. The widespread use of Quantum Design instrumentation by leading researchers and institutions worldwide underscores its status as the trusted leader for precision measurement in modern physical science.

8. To better serve its customers and strengthen domestic access to advanced dilution refrigeration technology, QD acquired the Oxford NanoScience division of Oxford Instruments on January 2, 2026. This acquisition combined two internationally recognized leaders in cryogenic research infrastructure: Quantum Design's industry-leading materials characterization platforms and Oxford NanoScience's world-renowned ultra-low-temperature cryogenic systems. Together, the combined organization now offers one of the most comprehensive portfolios in the industry, spanning temperatures as low as 5 millikelvin (mK) to magnet fields as high as 20 Tesla (T), and providing researchers with an end-to-end solution for cryogenic and quantum science applications.

9. Oxford NanoScience, an integral part of Oxford Instruments since the company's founding, played a pioneering role in shaping modern low-temperature physics research. Established in 1959 as the first commercial spin-out from the University of Oxford, the company has delivered technological innovation for over six decades. Through breakthroughs in sub-kelvin cryostats, dilution refrigerators, and high-field superconducting magnets, Oxford NanoScience became a leading

provider of the advanced instrumentation essential for frontier research in quantum information science, condensed matter physics, and advanced materials.

10. The combination of Quantum Design and Oxford NanoScience has created significant synergies in technology, engineering expertise, customer support, and market reach. By bringing together complementary product portfolios that have long served many of the same customers and research communities, QD is accelerating the development of next-generation cryogenic and quantum research tools. My understanding is that these capabilities are particularly important for advancing emerging technologies such as quantum computing, quantum sensing, and quantum communications.

11. Since completing the acquisition on January 2, 2026, QD has made significant investments to enhance its U.S.-based customer support, training, distribution, and service capabilities for dilution refrigeration systems. The company plans to continue expanding these efforts in the years ahead, further strengthening domestic technical expertise, improving responsiveness to customer needs, and supporting the growing demand for advanced cryogenic infrastructure. In addition, QD is pursuing the establishment of a domestic supply chain for quantum computing technologies through the U.S.-based manufacturing, assembly, and testing of key cryogenic systems and components. These initiatives are designed to reduce reliance on foreign suppliers, strengthen national capabilities in critical quantum

technologies, and help ensure that the United States remains at the forefront of quantum science and technology innovation.

12. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the results of these proceedings.

Executed on June 20, 2026 in San Diego, CA.



Karen De Los Reyes, CPA, CMA, MBA