**ADDRESS BY MR CHOO CHIAU BENG, CEO OF KEPPEL CORPORATION AND CHAIRMAN OF KEPPEL OFFSHORE & MARINE AT THE LAUNCH OF THE KEPPEL-NUS CORPORATE LABORATORY MONDAY 25 NOVEMBER 2013 AT 3.30PM AT NUS ENGINEERING AUDITORIUM**

Mr Teo Chee Hean, Deputy Prime Minister, Coordinating Minister for National Security and Minister for Home Affairs; and Chairman, National Research Foundation, Prime Minister's Office

Ms Yong Ying-I, Permanent Secretary, Public Service Division & National Research and Development, National Research Foundation, Prime Minister's Office, Singapore

Prof Low Teck Seng, Chief Executive Officer, National Research Foundation, Prime Minister's Office, Singapore

Dr Lee Boon Yang, Chairman, Keppel Corporation

Mr Wong Ngit Liong, Chairman, Board of Trustees, NUS

Mr Tan Chorh Chuan, President, NUS

Prof Chan Eng Soon, Co-Chairman, Keppel-NUS Corporate Laboratory and Dean, Faculty of Engineering, NUS

Distinguished Guests, Ladies and Gentlemen,

Good afternoon.

1. I hope you have enjoyed the video, which was produced and shown as part of Keppel Corporation's 45$^{th}$ Anniversary celebrations in August. Through the video, we tell the story of our growth journey, and of our attempt to project into the future which we hope to shape.

2. The future as we see it is articulated in our Vision. We aim to be the provider of choice for solutions to the offshore & marine industry, sustainable environment and urban living. From early on, we have identified that technology foresight is a key success factor in our chosen industries. We have therefore dedicated ourselves for years to leverage innovation to provide the solutions which the market requires.

3. Throughout our history, we have achieved results by listening to our customers. We have also come to realise that there is really no limit to how high we can reach, if we are open to trying out new ideas, investing in innovations, learning from the best and sharing our experiences.

4. Some of you may have heard our B Class jackup story. It is the B Class jackup design which propelled Keppel into the global league. It all began in the 1990s. There were then only two companies in the world supplying the critical jacking systems used to elevate the rigs, and we were totally reliant on them.

5. To give us better control of the supply chain and cost in the rig construction process, we developed our own proprietary jacking and fixation systems for the next generation of jackups. They proved to be effective. Today, these jacking systems, with over 2,800 units installed so far, are key components used in all Keppel-designed jackup rigs. We also bought Nippon Steel's plant in Kyushu, Japan, one of two reliable sources of the very special steel we use on our jackup legs.

6. We started developing our capabilities to design offshore rigs since the 1980s. However, we had a breakthrough only in the 1990s when we bought over a design which we jointly developed with a leading American designer. In consultation with our customers, we modified this design to suit the needs of the market. Today, it is the KFELS B Class, the industry benchmark for jackup rigs. By the end of this year, we will have delivered over 50 B Class jackup rigs.

7. Our B Class story taught us three key lessons: firstly, we must have the entrepreneurial spirit to carve out our own path; secondly, we need our own technology to stand out from the crowd; and lastly, we must offer what the market needs and create value for it.

8. Bearing in mind these lessons, we are therefore very happy to become the first Singapore company to collaborate with NUS in this Corporate Laboratory initiative supported by the National Research Foundation. NUS has been our long standing partner in R&D, with several ongoing collaborations such as CORE, or Centre for Offshore Research and Engineering. Professor Chan Eng Soon, Dean of Engineering of NUS and Co-Chairman of the Corp Lab, is also our current Keppel Chair Professor.

9. Together with NUS, we have spelt out the key thrusts of the Keppel-NUS Corp Lab. It will aim to become a global technology centre of excellence in the pursuit of resources in a safe and responsible manner from harsh environments and ocean beds, preserving and sustaining our environment. It will undertake R&D through Keppel's core

competencies and NUS' research expertise for solutions to Deepwater, Arctic and other fields.

10. In view of the constraints of people and land, and Singapore's ambition to be a global business and financial hub, our shipyards in Singapore cannot continue to evolve as we did in the last 45 years. There has to be a step-change to build with much less labour, using the latest technology in robotics, sensors, automation, and climate control, among others. We need to design and develop a Shipyard of the Future using less than half the manpower that we do now with double the output.

11. The world's incessant need for energy is fast depleting existing oil fields. This has pushed the search for oil and gas into deeper waters, harsher environments and new frontiers such as the Arctic region. Our DSS$^{TM}$38 series of semisubmersibles, with eight ordered by Brazil and one by Azerbaijan, are our proven deepwater solution. We continue to refine them so that they suit the operating challenges of different locations around the world. The ability to stay relevant and ahead in this market segment is to develop newer and better solutions, tapping on technologies developed in other fields, like aerospace, nanotechnology, computational and data analytics, and robotics.

12. The future also lies in resources on the seabed, in the form of polymetallic nodules. The collection of such deepsea seabed resources is now more commercially viable due to the development of new technologies and increase in metal prices. We have recently

established a company jointly with Lockheed Martin's UK subsidiary to apply for a licence in seabed collection. Called Ocean Mineral Singapore, this company aims to eventually carry out exploration works in certain blocks in the international sea space, while seeking to meet its commitments to the International Seabed Authority in the protection of the marine environment.

13. What I have just described forms the backdrop to the three key research thrusts of the Keppel-NUS Corp Lab: Future Systems, Future Yards and Future Resources. I am excited about the potential results of the Keppel NUS collaboration in these three areas. We are confident the Keppel and NUS researchers and scientists will achieve success in the rewarding journey ahead on this industry-university partnership.

14. Finally, I would like to thank DPM Teo for honouring us with his presence here today as our Guest of Honour, and for his encouraging words. Our sincere thanks to NRF and NUS for making this Corp Lab possible and we look forward to a meaningful and fruitful collaboration which will benefit future generations to come.

15. Thank you and have a wonderful day ahead.