Facilitating Commercial Lunar Water Ice Extraction: A Terrestrial Mining Perspective on Governance

B. McKeown¹, S. Saydam² A. Dempster³

- 1.PhD Student, Australian Centre for Space Engineering Research, UNSW, Sydney, NSW 2052. Email: b.mckeown@unsw.edu.au
- 2.Professor, Australian Centre for Space Engineering Research, UNSW, Sydney, NSW 2052. Email: s.saydam@unsw.edu.au
- 3.Professor, Australian Centre for Space Engineering Research, UNSW, Sydney, NSW 2052. Email: a.dempster@unsw.edu.au

ABSTRACT

The development of a robust, fit for purpose governance framework will be critical for the long term sustainable development of commercial lunar resource extraction, acting as both an 'enabler' of entrepreneurship and investment finance as well as providing the ground rules and oversight required for the development of off-earth resources.

There have been a number of recent initiatives to address this, most notably through the Hague Working Group (HWG) Building Blocks and through the US led Artemis Accords. The focus of both these approaches has been on developing a mechanism that could enable lunar resource extraction whilst not breaching the non-appropriation principle of the Outer Space Treaty. Whilst both initiatives are useful steps forward, neither appears to have considered the perspective of the entities likely to undertake commercial lunar resource extraction activities (should this ultimately eventuate) – entities similar to today's terrestrial mining companies. If, in the long term, there is real intent to facilitate commercial lunar resource extraction, the concerns and requirements of these entities will need ultimately to be addressed.

This presentation will:

- (i) outline some of the key characteristics of the commercial terrestrial mining industry that will be important factors to consider in lunar resource extraction;
- (ii) identify some of the specific characteristics of lunar water ice occurrence (such as they are currently known) that could impact on resource extraction governance;
- (iii) consider the resource extraction governance proposals contained in the Artemis Accords and the HWG Building Blocks from the perspective of the commercial entities that could consider undertaking such activity, taking into account (i) and (ii) above.