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Honourable Francois-Philippe Champagne
Minister of Foreign Affairs, Global Affairs Canada
125 Sussex Drive
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Cc: Right Honourable Justin Trudeau, Prime Minister of Canada
Honourable Chrystia Freeland, Deputy Prime Minister and Minister of Intergovernmental Affairs
Honourable Navdeep Bains, Minister of Innovation, Science and Industry
Honourable Seamus O'Regan, Minister of Natural Resources
Honourable Harjit Sajjan, Minister of National Defence

Dear Minister Champagne,

Re: US Executive Order on Recovery and Use of Space Resources and Open Letter from Outer Space Institute, Vancouver Recommendations, April 20, 2020

It recently came to the attention of Interstellar Mining Inc. ("IM") of an open letter from the Outer Space Institute dated April 20, 2020 regarding the Vancouver Recommendations and purporting to speak for the Canadian mining and space mining industries in reaction to the recent US Executive Order on the recovery and use of space resources. We are writing to you to correct some misrepresentations in this Open letter, offer commentary from a commercial operator in the Canadian space mining community and offer suggestions as to how Canada may craft its government policies to our National interest.

Interstellar Mining Inc. is a Canadian private corporation which is focused on the exploration of lunar resources and the development of the first operating lunar water mine by 2025. More information on the company can be found at www.interstellarmining.ca We are headquartered in Toronto, Ontario. The firm is an active member of the ISRU or space mining community globally and most recently attended the 2019 Canadian Space Summit in Kanata where we sought to advise Natural Resources Canada, the Canadian Space Agency, and others on how we felt commercial space mining would develop and how the Canadian government could assist. We regularly attend other major world forums including the Prospectors and Developers Association of Canada Conference, the Planetary and Terrestrial Space Sciences Symposium and Space Resources Roundtable, and Space Resources Week in Luxembourg. Our founding ownership group has over 20 years of experienced in space resources development.

US Executive Order on Recovery and Use of Space Resources

On April 6, 2020, the President of the United States signed an Executive Order on encouraging international support for the recovery and use of space resources. This Order acknowledges uncertainty concerning legal rights to recover and use space resources. This follows the US 2015 Commercial Launch Competitiveness Act which attempts to recognize US citizens and companies' ownership of resources gathered in space. The Order further mandates the US State Department to seek support from other national governments for the US position that outer space is not a global-commons and favours a unilateral approach. This view is currently shared by Luxembourg. It is likely Global Affairs Canada will soon be approached on this file.

Vancouver Recommendations from Outer Space Institute Do Not Represent Space Mining Community

In response to the Executive Order, the Outer Space Institute held a conference in Vancouver and issued both an open letter to the Government of Canada and recommendations on the policy position of the government of Canada. The open letter purports to speak for the Canadian mining and space mining industries; this is untrue. IM notes none of the contributors or signatories are employed by the Canadian mining or space mining industries rather they are all academics. While we note this group has a legitimate right to express its views and influence policy; they cannot claim to represent the views of the commercial Canadian mining and space mining industries.

Perspectives on the Outer Space Treaty (1967) and Commercial Rights to Space Resources

IM believes the US Executive Order and Commercial Launch Competitive Act (2015) were issued as a direct result of the ambiguities around commercial ownership of space resources resulting from the Outer Space Treaty (1967) which Canada is a signatory. Under the Outer Space Treaty, no country can claim sovereignty over space. This Treaty was written and signed at a time when space was the domain of nation states with substantial monetary and technical resources to operate there. The Treaty did not envision commercial operators engaged in commercial activities in space. In the intervening years, there has been no substantive attempts to renegotiate the Outer Space Treaty to reflect the emergence of non-state commercial or non-commercial operators.

IM believes a long-term solution to this problem is the development of a new Outer Space Treaty between all the space powers to both regulate off-world activities so to avoid conflict between nation states and other actors involved in off-world activities. We support the Government of Canada to endeavour to negotiate a new treaty; however, we are of the opinion that such a negotiation could take decades and may not be ratified by all of the space faring nations of the World.

The US Executive Order by the US, the US Commercial Launch Competitiveness Act (2015), and the Luxembourg legislation are all attempts by nation states with commercial ambitions in space to plug the short-term gap in legal certainty for commercial operators and to gain national competitive advantages for a nascent industry.

We note the recently published *Canadian Metals and Minerals Plan* specifically comments on the importance to Canada in supporting technical innovation especially around the development of space mining. IM believes it is in our national interest to take a two-track approach by recognizing the property rights of Canadian companies and individuals who develop and gather space resources via national legislation while in parallel seeking to develop an international framework via a new treaty. The US and Europeans are following this approach. WGM has heard that Australia, the United Kingdom, UAE, and Japan are all looking to pass national legislation. Canada will be at a competitive disadvantage if we do not act.

IM is 100% Canadian owned and operated; however, for commercial reasons we may need to consider redomiciling to another jurisdiction due to legal ambiguities, restrictive national policies, or competitive disadvantages by remaining in Canada. This is not our preference, as we wish to see Canada be the centre for the off-world mining community globally.

Peaceful Development and Colonization of Outer Space

IM supports the premise of the Outer Space Treaty which supports the peaceful development of space. In reviewing the recommendations of the Open Letter, IM believes if they were followed the development and colonization of space would be severely curtailed. It has been our experience in engaging in education on space mining that many professionals and general citizens are anchored in their viewpoints based on terrestrial experiences. The Moon or space is not the Earth. Unfortunately, many try to project an Earth based regulatory analog off-world where it does not fit.

Near Earth space and the Moon are devoid of life, are subject to high level of natural radiation from the Sun, cosmic rays, micro meteors, solar wind, and massive thermal fluxes. Pollution and the normal negative externalities associated with it in a terrestrial setting simply do not apply in space in the same way. Further, the scale of lunar mining is miniscule compare to Earth mining.

Imposing a mandate to follow nationalistic rules on flagged commercial space operators which blanket prohibit or severely limit commercial activities, such as space mining, in favour of other endeavours will result in strong incentives to transfer to a flag of convenience. Further, since no country can impose sovereignty in space, there is no enforcement mechanism for many of the rules suggested in the Open Letter. Only a negotiated treaty between space powers which recognizes the importance of commercial development and the realities in space will be effective in an environment of law, order, and good governance.

Interstellar Mining Inc. supports the concept of being a responsible galactic citizen in our endeavors. This means ensuring we limit or eliminate any negative externality from our operations. We seek not to interfere with any other peaceful operator engaged in any activity and we seek to limit consumables via resource efficiency. Finally, where feasible, we will reuse or recycle our equipment.

A final item of note is the recent declaration by NATO that space is a war fighting domain. The US has created a new Space Command to reflect this reality and IM believes Canada may need to be engaged in

its operations via NORAD. IM's operations will likely have dual military/civilian use as we may have the only refueling station on the Moon. We are aware the Chinese are activity involved in space militarization and all space powers view the Moon as the strategic high ground. We believe this geopolitical reality should spur governments, including Canada, to negotiate a new Outer Space Treaty in the hopes of foregoing conflict over resources in space. Further, IM as a Canadian company would like to see Canadian military protection extended to our operations to protect against piracy or other threats by nation state and non-nation state actors.

Government of Canada Policy Development

As with any government policy, it is critical that all stakeholders are engaged so informed policy can be developed. For space mining and resource development, IM believes commercial operators from the mining and space mining communities should be directly consulted. There are significant technical, scientific, and engineering aspects to operating in space which may elude those with only terrestrial experiences to draw on. A national advisory board should be assembled which includes all major stakeholders in the file to raise pertinent issues, present facts, and advise the Government on policies which support development, exploration and colonization of space, with Canadians in the fore. Interstellar Mining stands ready to participate on such a committee.

We trust our thoughts and ideas are helpful as the Government attempts to draft its own national position and engage with other space faring nations on how to peacefully develop Earth's presence in outer space.

Yours most sincerely,



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