

**Statement of
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**Before the
Committee on Natural Resources
Subcommittee on Oversight and Investigations
U.S. House of Representatives**

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Chairman Gosar and members of the subcommittee, Starpath appreciates the opportunity to testify about the exciting opportunities developing in space mining. This timely hearing indicates the Committee's recognition of the importance of America staying on the forefront of this emerging industry.

Starpath is building a rocket propellant mine and refinery for the Moon and Mars at mega scale. This means that Starpath designs and builds three main categories of equipment as part of a vertically integrated system. The first is equipment that can mine and transport huge amounts of raw resources on the surface of the Moon and Mars. The second is equipment that can process those resources into highly valuable commercially salable products including rocket propellant, water, and eventually exportable goods like Helium-3, which is an important natural resource that can only effectively be sourced from the Moon. The final category is equipment to cheaply generate huge amounts of power for both aforementioned components. Starpath will be an important part of the United States' domination of our adversaries in the new space race and it won't even be close.

Right now, the United States has the opportunity to develop low cost travel to the Moon and Mars. Soon, it may be possible to use a rocket to fly to a Moon base much like we use airliners to fly to airports like JFK today. Building this future could combine the inspiring and patriotic unifying effects of the Apollo program from the 1960s with the stimulating economic activity of the construction of the Union Pacific railroad in the 1860s.

This future is closer than you might think. Enabling low cost access to the Moon and Mars requires two main components.

The first is a fully and rapidly reusable rocket. Amazingly, SpaceX, an American company, is expeditiously developing its new Starship rocket, which will be exactly that. Starship is the

most powerful and largest flying object ever made by the human species. SpaceX has successfully flown and publicized seven orbital test flights, and demonstrated many if not most of the technologies required for full and rapid reuse. These technologies include catching their booster stage out of mid air with giant mechanical arms, and high velocity reentry of their upper stage into the Earth's atmosphere. These are incredible feats of American engineering, and we should be proud.

The second element may be less discernible to those unfamiliar with our industry. To unlock low cost access to the Moon and Mars requires a rocket propellant mine and refinery on the Moon and on Mars; essentially, a gas station. Broadly speaking, the laws of physics limit the operation of a mission to and from the Moon or Mars without refueling. Fortunately, Starpath, the company I am proud to represent today, has built, in America, the world's most advanced system for mining on the Moon and Mars. Starpath is excited to announce that this month, that system will be operational in a fully integrated state at our headquarters in Los Angeles – we invite members of the committee to come visit! This outcome to the credit of the incredible Starpath team. The Starpath team is currently working tirelessly to bring our first system to flight readiness, and to put ourselves, our partners, and the United States at the top of a global leaderboard of space-faring countries. Our mindset is that there is no prize for second place. By mid next year, we will be ready to ship a mine and refinery for the surface of the Moon that is twice as powerful as the most powerful man-made satellite ever made, the International Space Station. The following year, Starpath's capacity will reach twenty times that of the ISS, and the following year, 200 times. In less than four years, the system will be large enough to support a city of 10,000 inhabitants on Mars. These mines will extract resources and produce commodities to support billions of dollars of commercial activity each year, and yet will cost less than \$100 million to produce. These aren't just the most powerful systems of their class, they are the most powerful space systems ever made.

Space mining has the potential to unlock costs of space transport hundreds or even thousands of times lower than what we see today, and correspondingly, to drive immense, unprecedented commercial activity. China also has plans to go to the Moon and Mars, and they have demonstrated an ambitious attempt to equal and exceed U.S. efforts in tapping space resources. Last year, the Chinese launched a mission specifically to collect and return samples of natural-resource rich land on the Moon. This was in the same year NASA canceled its flagship VIPER mission to map valuable resources on the Moon. If China succeeds in its goal of exceeding U.S. presence and capacity in space, they will control land and resources on the Moon and Mars. Perhaps more importantly, China will be viewed by the rest of the world as the country pushing the edge of the frontier. We refuse to let that happen. Americans invented this game in the 1960s with Apollo, and this is still our game to win.

In order to do so, we believe that the government needs to do an excellent job in three areas. The status quo in these areas is commendable, but there remains some room for improvement.

First, aerospace companies in the U.S. need to launch rockets frequently in order to accelerate the inevitable cost reductions of access to space. Right now, the Federal Aviation Administration and various government environmental groups, such as the US Fish and Wildlife Service, have an approval rate slower than the cadence of the rocket launches themselves. These delays limit our ability to engineer, and tangibly push back crucial timelines for businesses like Starpath.

Second, congressional funding for NASA must align with this Administration's goals to stay competitive in the global race for space resources. NASA has outlined a plan for a space mining contract called LIFT-1. The contract will provide the necessary financial kick-start for an economy driven by space resources, and will return more to the taxpayer in reduced cost of access to space than its line item value. Moreover, LIFT-1 will give the U.S. an edge in establishing dominance in the emerging space resources economy.

Third, we need to revisit rules designed to protect the ability to conduct scientific research in space. In the 1960s, we signed the Outer Space Treaty. The Outer Space Treaty describes "planetary protection," which is a well-intentioned ruleset designed to protect other planets from our own biological contamination. As it stands today, planetary protection rules are actually in direct conflict with NASA and the President's stated objectives to put humans on Mars. The ability to run frequent, low-cost missions to the Moon and Mars – an ability which is unlocked by space mining and efficient utilization of space resources – will be a boon to scientific research. If left unchanged, the Outer Space Treaty may be the reason the U.S. loses ground against competing countries in space research. The treaty deserves careful examination and a modern refresh.

Starpath is grateful to the Committee's attention to this exciting area of untapped economic potential and technological innovation. The future we envision is a future where America dominates the new space race, where American companies own the market for space resources, and where America cements its position as the dominant technological force of planet Earth. To make this future a reality will depend on the support of Congress, and on establishing the crucial public-private partnerships that have driven some of the most groundbreaking innovations in this country's history. Starpath thanks the Committee for convening this hearing, and looks forward to providing its honorable members with any further information.

Please contact saurav@starpath.space with any questions or if we can provide any additional information.