



Mining Bases Planned for Planet Mercury

Foundation Society President Johannes Cilliers IV announced today that the organization is planning to build multiple mining bases on the surface of the planet Mercury. Due to the severe conditions on Mercury, these bases will all be built underground and crew activities on the surface will be constrained to brief periods of time. Cilliers said “we have surveyed mining opportunities on the planet, and determined that with four generic habitat designs, we can build bases in all of the locations we have identified as promising for mining the ores we want.”

The Foundation Society aggressively investigated possible commercial opportunities throughout the solar system after fusion propulsion technology allowed relatively rapid and cost-effective interplanetary transportation. While surveying Mercury, a geologist and an engineer left samples of various alloys on the surface for an entire 175 Earthday-long day, which led to the discovery that long exposure to solar heat and radiation, followed by a long “cold soak”, changes material properties in unexpected ways. Further experiments with varying exposure times and numbers of hot/cold soak cycles led to development of a true miracle metal: lightweight, strong, amenable to producing complex shapes, self-lubricating, and providing protection from heat, cold, and radiation. So similar is it to the miracle metal called “Reardon Metal” in Ayn Rand’s novel *Atlas Shrugged*--including the blue-green color--its inventors named it “reardonium”.

The reardonium refining and manufacturing facility established by the Foundation Society on Mercury has reached its production capacity. According to Smith, the planned bases will mine ores on Mercury, ship the ore to a refinery being built for large-scale reardonium production on a large space settlement in Mercury orbit, receive reardonium parts from the refinery, place those parts on the surface of Mercury to cure for up the three cycles of extreme hot and cold temperatures, then ship the cured parts back to the orbital settlement for delivery to customers. A large settlement is also planned on the surface to improve shipping efficiency to and from the planet.

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Cilliers justified the challenges of working on Mercury by saying “this amazing reardonium metal is enabling development of much more efficient spacecraft than ever seen before. We have customers who make engines and spacecraft structures out of it. The engines can run at higher temperatures, are lightweight, and the reardonium parts self-lubricate. It is stronger than any other known metal, so structures can be built with less material. We can form it into complex shapes, and it’s perfect for space structures because it provides protection from heat, cold, and even radiation. The stuff is so amazing that some of our customers pay to have it delivered to Earth’s surface.”

Mineralogist Lisa Cantu observed that resources for making reardonium are abundant and accessible. She said “It looks like the fastest mining sites to develop will be lava tubes, which are huge on Mercury, just like on Mars, and some of them are just a few miles away from ore deposits we can use for making reardonium. Mining towns can easily be built inside lava tubes that are hundreds of meters wide and high, tens of kilometers long, and with roofs meters thick that maintain a benign temperature inside.” Survey manager Gale Uttamchandani noted, however, that the dirt on Mercury is just as nasty as the fines on Mars “and even though there is no atmospheric wind on Mercury, we will need to drive vehicles around on the surface, and the vehicles will get covered in the stuff.”

Engineer Tom Yubickovich added that “being able to make more reardonium more efficiently makes the difficulties of living on Mercury worthwhile. In fact, reardonium will help make operations on the planet possible: just a quarter inch of it will protect people from both solar and cosmic radiation. The only thing it won’t do is tolerate severe cold or hot for long periods of time, because the conditions that were used to cure it will eventually alter its properties.”