WHAT FUTURE LIES BEYOND THE FINAL FRONTIER?

Asteroid Mining May Be Our Solution to Global Scarcity

We’re running out of stuff. It’s impossible to ignore; every year news sources bombard us with news of our poor situation. But picture this: countless troves of precious treasure just above us, able to solve all our problems, should we just reach out and grab them. Such a concept might seem like fantasy, but it doesn’t have to be. A new industry is being born, one which could revolutionize the current problems of resource harvesting before the next century: Asteroid Mining.
Asteroids: Our Modern Jackpot

There are four types of asteroid, but the two this industry are most concerned with are the Carboniferous (C-type) and Metallic (M-type) asteroids which make up approximately eighty-two percent of all asteroids. M-type asteroids (~8%) are chock-full of the valuable metals, including steel and platinum-group metals, we would bring back to Earth or use to build in space without the insane cost of sending payloads through the atmosphere. C-type asteroids (~75%), however, contain Volatile Organic Compounds like gaseous carbon, nitrogen, and most importantly, water, with the hydrogen and oxygen contained within it, the building blocks of rocket fuel. The foundation for a sustainable, space-based industry “is likely a near-term development.... Thus there will be a market for... station-keeping and deorbit propellant,” meaning as industry increases, these C-types will become even more valuable (Sonter, 1998).

As Common as Salt in the Sea

Approximately twenty-thousand viable Near-Earth Objects have been discovered, at an average of approximately one hundred per year (IAU MPC), which only
increases as satellite technology becomes more advanced, with an estimated total of one million asteroids larger than 1 kilometer (Metzger, 2015). Additionally, asteroids can have precious metal densities hundreds of times that of Earth, as proven by platinum-group metals all being of extraterrestrial origin. This coupled with the relative homogeneity of most asteroids’ compositions (MIT, 2016) means that mining would be potentially both simple and bountiful, making it massively lucrative, once initial investment costs have been recouped.

**Beyond Raw Materials**

Asteroid mining isn’t exclusively for padding corporate executives’ pockets, although it is estimated that the first trillionaire will be made from the industry, according to Goldman-Sachs. Asteroid mining would alleviate significant pressure from the environment, virtually eliminating the need for antiquated and harmful strip-mines, and securing thousands of kilometers of land for less destructive purposes.

Additionally, it would essentially eliminate “capacity crunches,” or world-wide resource deficits, in computing and energy (Metzger 2015), and the global population could continue to rise without decreases in quality of life. Multiple new industries could be bootstrapped on the foundation made by asteroid mining, including space tourism, energy production, and considerable scientific inquiry. Overall, asteroid mining would potentially affect a revolution in most major human industries, and possibly remove the problem of scarcity for decades if not centuries.
How We Fit In

Asteroid Mining would be on the cutting edge of aerospace and aeronautics development. With all the intricate and sensitive technology required to achieve such a monumental endeavor, only the most sophisticated and reliable maintenance equipment should be depended on. Here at SPI Borescopes, we are excited to provide only the best borescopes and survey equipment available to companies such as NASA, to further the industries that change the world we live in, and soon, beyond.