Ore prospecting on the Moon, Mars, and asteroids

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Ore prospecting for extraterrestrial mining has a different scope on Mars, the Moon, and asteroids. All of the recovered resources on Mars will be used to develop local bases, likewise, on the Moon, but except for helium-3, feasible to bring it to Earth. Asteroids can be brought to Earth, but probably also to Mars and the Moon to supply bases there. Different is also timescales with lunar mining possible to start yet in this decade, Martian mining in the first half of this century, and asteroid mining until the end of this century. Despite those different timescales, early ore prospecting efforts should focus on remote sensing activities, including spectroscopy (e.g., IR, XRF) and geophysics (e.g., radar, magnetometry). Polish Lunar Mission based on the far-IR MIORES spectrometer envisaged for 2028–2032 fits well into this strategy.