Anti-patents 11-2022

Alternating Drill Handedness to Reduce Borehole Drift

When performing deep drilling activities on a planet, moon, asteroid or other body, each trip to the surface may be accompanied by a switch to a drill bit / boring head / coring head of the opposite handedness of the previous (this includes making the change at other intervals as may be necessary, i.e. every fifth trip, etc.). For example, after drilling with a right-handed drill head, when returning to the surface to clean out cuttings, a left-handed drill may be installed. It is envisioned that this technique may be used with the borebots drilling strategy (ref. Morley, 2021, http://www.marspapers.org/paper/Morley_2021.pdf and https://borebots.fyi and https://www.nasa.gov/directorates/spacetech/niac/2021_Phase_I/Autonomous_Robotic_Demonstrator_for_Deep_Drilling/) to reduce the drift of the borehole with depth.