Motivated by the prospect of computing agents that explore unknown environments and construct convex hulls on the nanoscale, we investigate the capabilities and limitations of a single deterministic finite automaton robot in the three-dimensional hybrid model for programmable matter. In this model, active robots move on a set of passive tiles, called configuration, with the geometric shape of rhombic dodecahedra on the adjacency graph of the face-centered cubic sphere-packing. We show that the exploration problem is equally hard in the hybrid model and in three-dimensional mazes, in which tiles have the shape of cubes and are positioned at the vertices of Z^3. Thereby, a single robot with a constant number of pebbles cannot solve this problem in the hybrid model on arbitrary configurations. We provide algorithms for a robot with two pebbles that solve the exploration problem in the subclass of compact configurations of size n in $O(n^3)$ rounds. Further, we investigate the robot's capabilities of detection and hull construction in terms of restricted orientation convexity. We show that a robot without any pebble can detect strong O-convexity, but cannot detect weak O-convexity, not even if provided with a single pebble. Assuming that a robot can construct tiles from scratch and deconstruct previously constructed tiles, we show that the strong O-hull of any given configuration of size n can be constructed in $O(n^4)$ rounds, even if the robot cannot distinguish constructed from native tiles