Method for the process of rotary drilling control comprises of feeding the washing liquid to the drilling pipes with the rock destruction tool screwed-on, creating axial loading on the bit, bringing its rotor into rotation. Controlling of the drill bit rotation frequency is carried out to the value taking into account the bit structure, the lower part of the drilling string structure, the rotor drive installed power, energy consumption in the process of the rock destruction, the well inclination angle, the washing liquid parameters, physical-mechanical properties of rock.