**Introduction:** Highly probable that the life on Mars can exist in under frozen waters. At least in the areas of the largest impact structures the thickness of the cover of the granulated and fractured grounds [1,2] should surpass the depth of the permafrost development [1,3], that makes possible the presence of the liquid under frozen water in the pore space of this cover. The powerful permafrost development in the conditions of the water-encroached sedimentary cover causes the formation of big hydrostatic pressures, in the depressions, which can provide the formation of the considerable (by volume) injections of the under frozen waters in the near-surface layers. The author assumes that in the central and the deepest part of the Holden Crater that is located down on marks less than -2000 m relative to the average surface of the planet we observe a development field of injection structures - hydrolaccoliths, having the sizes up to 3-4 km in a diameter and more than 0,5 km in height (Fig. 1).

![Fig. 1. The hydrolaccoliths of Holden Crater](image)

**Water source and supposed hydrolaccolith structure:** The volume of just three the greatest structures in Holden Crater centre (in the top right corner of Fig. 1) can make not less than 4,8 km³, that, taking into account a ratio of density of ice and water (0,917), indicates the volume of the frozen underground water - 58 km³, and, taking into account a supposed porosity of the elastic rocks at a depth of 2,5 km - 0,15, indicates the involved volume of under frozen hydrosphere - 385 km³.

The radial depression on its rim (in the left corner of Fig. 1) can be the evidence of the assumption of the closed lens presence of the underground waters under the Holden Crater which could arise as an erosive valley at effluence the water superseded by a frozen ground.

The basic structure of a hydrolaccolith as to [4] is shown on Fig. 2.

![Fig. 2. The scheme of a supposed structure of the Martian hydrolaccolith.](image)

The presence of liquid water, the security from a rigid irradiation and from a considerable temperature oscillation, the saturation of mineral substances and gases raise chances for existence of life forms in the under frozen hydrosphere even in the conditions of the global climatic changes and the loss of a considerable part of Mars atmosphere.

The microorganisms could be transferred from the under frozen layers along fractures with ascending streams of water, and later their remnants could be preserved in the hydrolaccolith ice. Thus, the remnants of hypogene micro-organisms stand considerably better chances to remain till now unlike the microorganisms that could once exist in the near-surface ecotopes and their remains were exposed to destruction in the surface condition.

**Places of life traces search:** The most enriched by biota remains material, exposed to the least changes, according to the author, is the dry rest of the sublimated ice in the places of hydrolaccolith ice mass destruction (Fig. 3), the sign of this should be enriement of salts.
Fig. 3. The basic scheme of degrading hydrolaccolith and the places of sampling.

Presumably, the dry rest consists of salts, clastic material (that has got inside of hydrolaccolith in the course of its formation with possible inclusion of the microorganism rests), and organic material (that is a product of live substance metabolism). Per se the dry rest should cover the vertical terraces that are available within the hydrolaccolith (fig. 3), and also can enrich a ground at a place of the sublimated part of hydrolaccolith and in the last case on a priority basis there should be rather young deposits at the bottom of degrading ice terraces.

Thus, in case of the research mission, the life trace sampling is necessary to take either from vertical walls, or from the ground near the degraded edges of hydrolaccolith - in a layer enriched by salts - i.e. from the essentially lighter substratum. The presence of organic substances and methane in the underground ice can also be a probable sign of microorganism remains presence.

The possible objects for researches in the Holden Crater are to the east from a place of the supposed landing. The largest hydrolaccoliths, having a diameter 0.5-4 km, (Fig. 4) are 6-45 km distant from an ellipse contour of a supposed landing.

Fig. 4. Possible places of life trace searches at the hydrolaccolith

The example of a large hydrolaccolith area with abrupt rims, where it would be possible to make approbation of sublimate and possibly of ice, is shown on fig. 5.

Conclusions: 1. The assumption of existence possibility of under frozen hydrospheres in the Holden Crater is based on the decoding of the conical structures as the big hydrolaccoliths, the radial valley in a crater rim as the gully and rectilinear channels as the cracks of separation of the permafrost plates. 2. The greatest probability to find the life on Mars is in the under frozen water. Its traces can be preserved in the ice structures - hydrolaccoliths, a source of water for which is under frozen hydosphere. 3. The most suitable objects for microorganism remnants searches in one of the supposed landing places of a rover in 2012 are the degraded abrupt terraces and talus at a bottom of the large hydrolaccoliths in the central part of Holden crater - to the east from a landing ellipse. 4. The salt salutation i.e. the light colouring of substratum, and also the presence of organic substances and methane in the underground ice can be a probable sign of microorganism remains presence in substratum.