

NASA PICKS ANCIENT MARTIAN RIVER DELTA FOR ROVER LANDING

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NASA has picked an ancient river delta as the landing site for its uncrewed Mars 2020 rover, to hunt for evidence of past life on the earth's neighbouring planet, officials said on Monday.

Even though the Red Planet is now cold and dry, the landing site, Jezero Crater, was filled with a 500-meter deep lake that opened to a network of rivers some 3.5 to 3.9 billion years ago.

"The delta is a good place for evidence of life to be deposited and then preserved for the billions of years that have elapsed since this lake was present," Ken Farley, Mars 2020 project scientist at NASA's Jet Propulsion Laboratory, told reporters on a conference call.

Experts believe the 45-km wide basin could have collected and preserved ancient organic molecules and other signs of microbial life.

At least five different kinds of rocks, including "clays and carbonates that have high potential to preserve signatures of past life," are believed to lie in the crater, just north of the Martian equator, the US space agency said in a statement.

Carbonate rock is produced by the interaction of water, atmospheric gases and rock, and leaves clues about habitable environments, said Farley.

Scientists have debated where to land the rover for the past four years, and whittled down their decision from more than 60 possible sites.

The \$2.5 billion rover is planned to launch in July 2020, and land in February 2021.

Mars 2020 is designed to land inside the crater and collect samples that will eventually be returned to Earth for further analysis, perhaps by the later 2020s.

But first, the rover has to make it to the surface intact and upright, dodging a field of boulders, sand traps and the edges of the delta.

Mars 2020 will use the same sky crane landing that successfully delivered NASA's unmanned Curiosity rover to a location called Gale Crater on Mars back in 2012.

Gale Crater, with its many layers of sediment, was chosen to tell the story of how Mars transitioned from a warm, wet planet to the frigid and dusty one it is today.

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