Is this proof of life on Mars?

13 April 2012, by Jason Major

View of Mars from Viking 2 lander, September 1976. Credit: NASA/JPL-Caltech

The Curiosity rover is currently on its way to Mars, scheduled to make a dramatic landing within Gale Crater in mid-August and begin its hunt for the geologic signatures of a watery, life-friendly past. Solid evidence that large volumes of water existed on Mars at some point would be a major step forward in the search for life on the Red Planet.

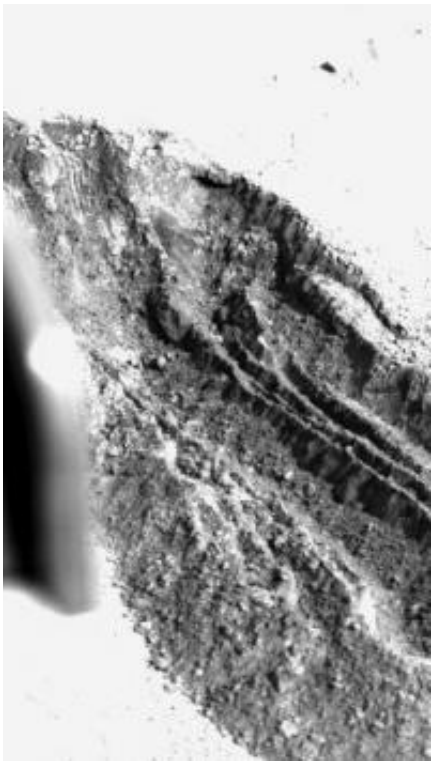
But… has it already been found? Some scientists say yes.

Researchers from universities in Los Angeles, California, Tempe, Arizona and Siena, Italy have published a paper in the International Journal of Aeronautical and Space Sciences (IJASS) citing the results of their work with data obtained by NASA's Viking mission.

The twin Viking 1 and 2 landers launched in August and September of 1975 and successfully landed on Mars in July and September of the following year. Their principal mission was to search for life, which they did by digging into the ruddy Martian soil looking for signs of respiration - a signal of biological activity.

The results, although promising, were inconclusive.

Now, 35 years later, one team of researchers claims that the Viking landers did indeed detect life, and the data's been there all along.



A six-inch-deep trench in the Martian soil dug by Viking 1 in February 1977. The goal was to reach a foot below the surface for sampling.

"Active soils exhibited rapid, substantial gas release," the team's report states. "The gas was probably CO2 and, possibly, other radiocarbon-containing gases."

By applying mathematical complexities to the Viking data for deeper analysis, the researchers found that the Martian samples behaved differently than a non-biological control group.

"Control responses that exhibit relatively low initial order rapidly devolve into near-random noise, while the active experiments exhibit higher initial order

which decays only slowly," the paper states. "This suggests a robust biological response."

While some critics of the findings claim that such a process of identifying life has not yet been perfected - not even here on Earth - the results are certainly intriguing… enough to bolster support for further investigation into Viking data and perhaps re-evaluate the historic mission's "inconclusive" findings.

The team's paper can be found here.

Source: Universe Today