Mars: Let There Be Life?

Period 1 Students

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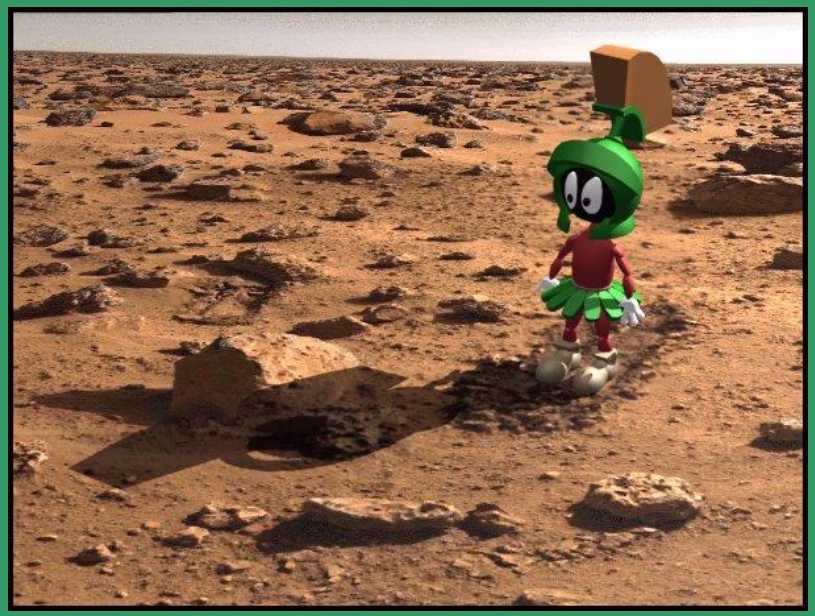
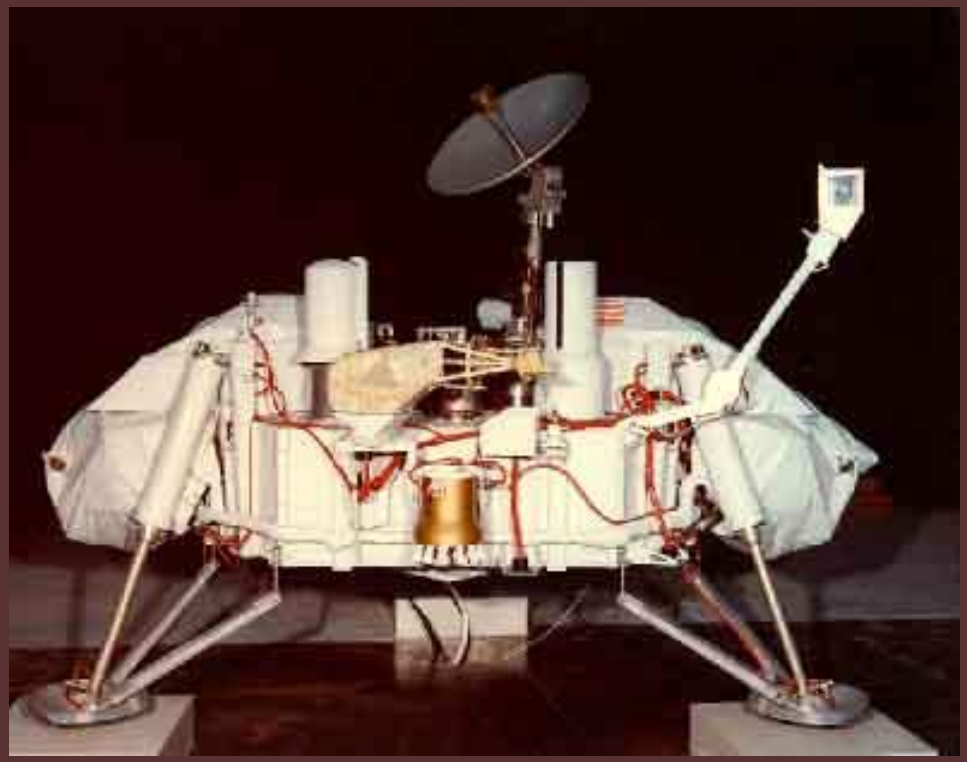
What we think

- **Although life has not been discovered, it is highly possible that there has been life on Mars. There has been plenty of evidence to back this up. But first, let's ask the question, why *couldn't* there be life on Mars?**



The Unbelievers

- **People who don't believe that there's life on Mars say that its environment is too harsh to support life: The planet's dryness and short-wavelength ultraviolet radiation guarantee a lifeless Mars.**



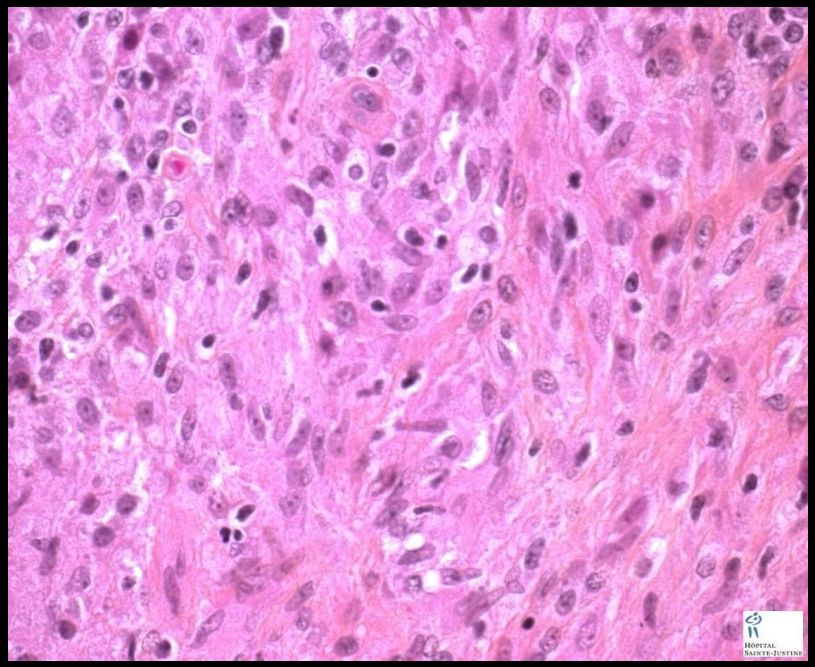
The Viking brought back the data to support the unbelieversô suspicions.

Why They're Wrong

- **It is common knowledge that organisms of the world can adapt to their environment and thus survive even the harshest living conditions. Penguins are a good example, as so many learned from watching March of the Penguins. Organisms on Mars are no exception. Although perhaps no living thing on Earth could survive in Mars, Martian creatures would be born and raised there, equipped with their body's own personal survival kit.**

Evidence of Life on Mars

Å Now that it has been disproven that there is no life on Mars, letôs explore the evidence that there is!



Life can range anywhere from huge animals like elephants to microbacteria and other single-celled organisms.

Water

- **Missions to Mars have provided information concerning the presence of dry riverbeds, rocks formed in water, and ice at Mars's polar caps.**

Ice

- **Ice, the frozen state of water, has been discovered on Mars. This is undeniable evidence that somewhere at some point in time, there was liquid water on the face of Mars. Wherever there is water, there is life, no matter how big or small it is.**

Chemical Evidence

- In 2003, scientists discovered methane signatures which could have been preserved in water which are very similar to those found in caves on Earth.

Similarities between Mars and Earth

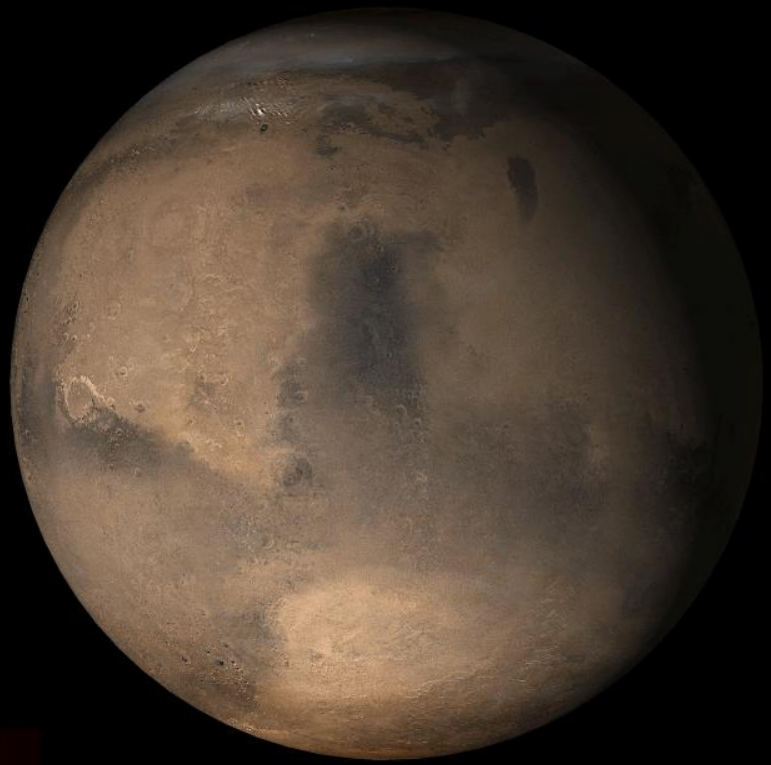
- Some of the evidence that there is life is simply that the two planets Earth and Mars are so similar.

Mars' Axis

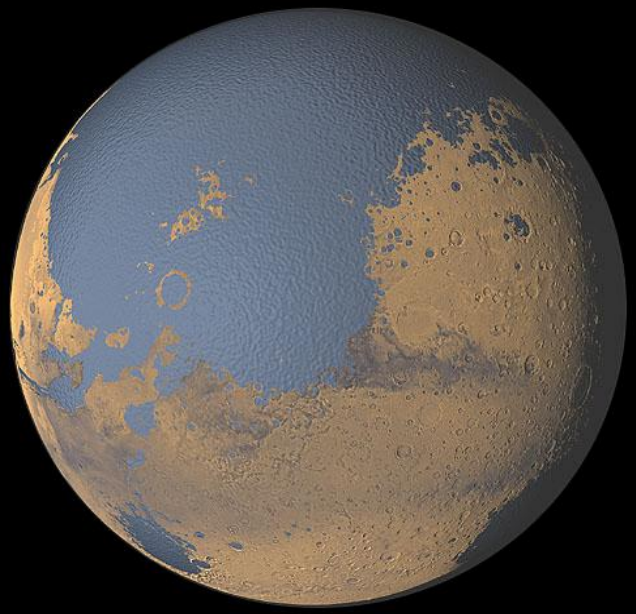
- Marsô axis is very similar to ours on Earth. The tilt is approximately 25 degrees, differing from Earthôs by only a couple of degrees.

Day Length

- Marsôday is very similar to Earthôs, as far as length is concerned. The length of a day on Mars is approximately 24.6 hours.



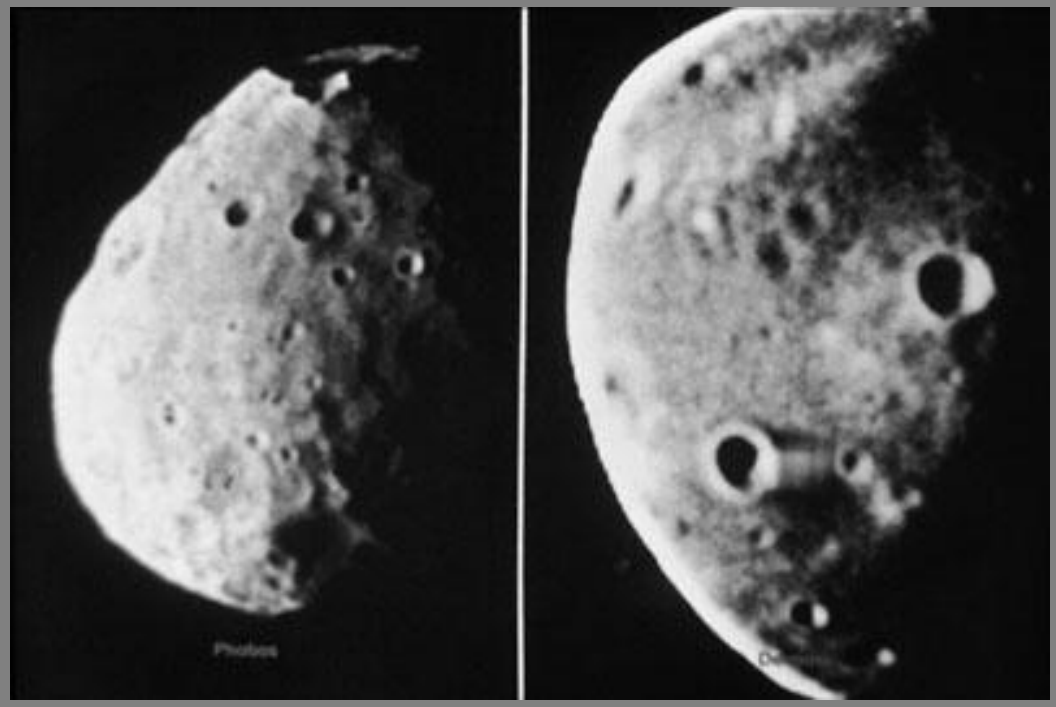
Size and Mass



- Mars is approximately half the size of planet Earth and about 1/9th the mass of Earth.

Moons

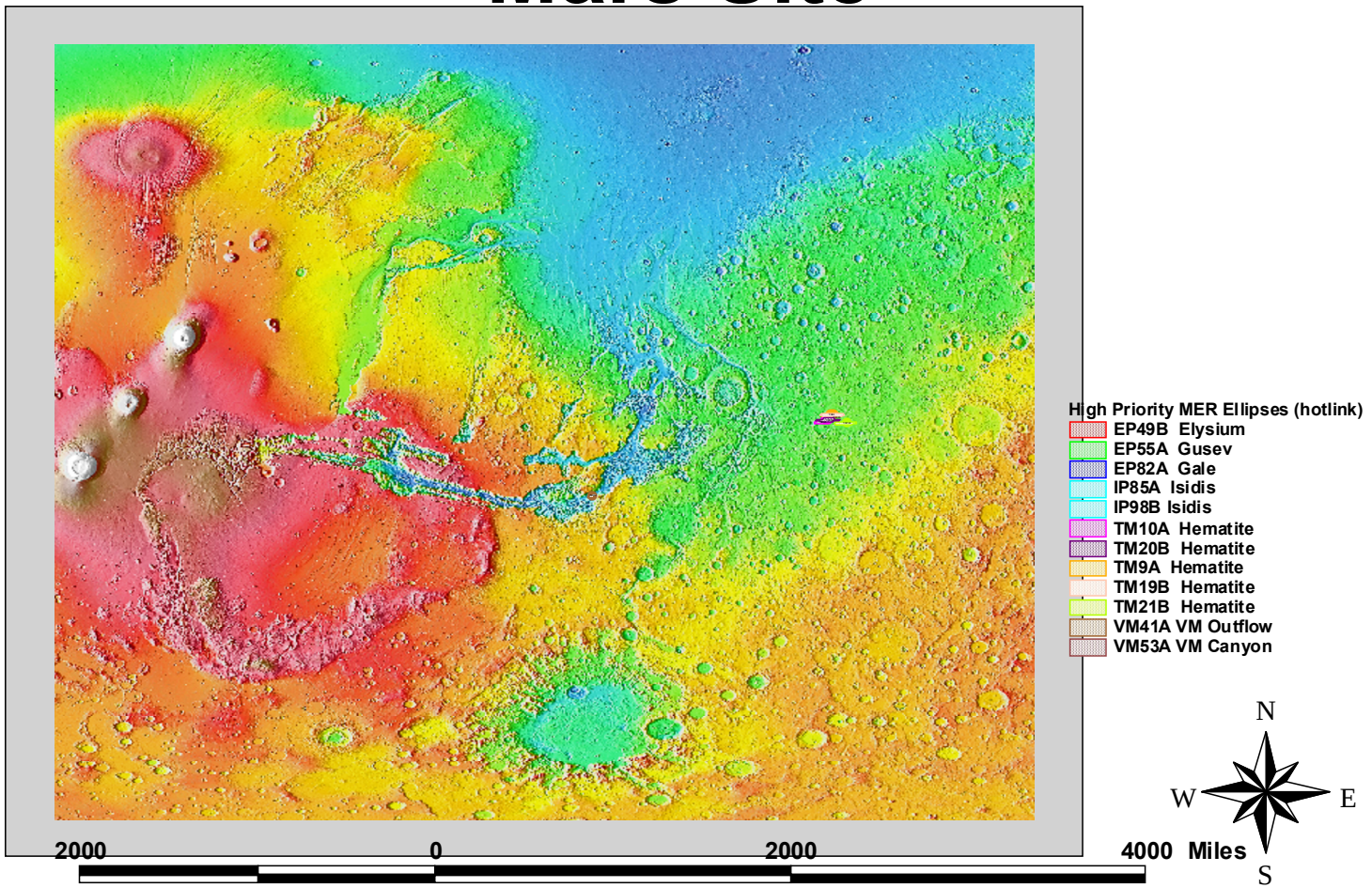
- Mars is the only other terrestrial planet to have a moon. In fact, it has two! They are called Phobos and Deimos, named after the horses (Fear and Terror, respectively) who carried the Greek god Mars' chariot.
- Most of life on Earth depends on the moon, for it controls the tides and centers its balance.



Mars Investigation Sites

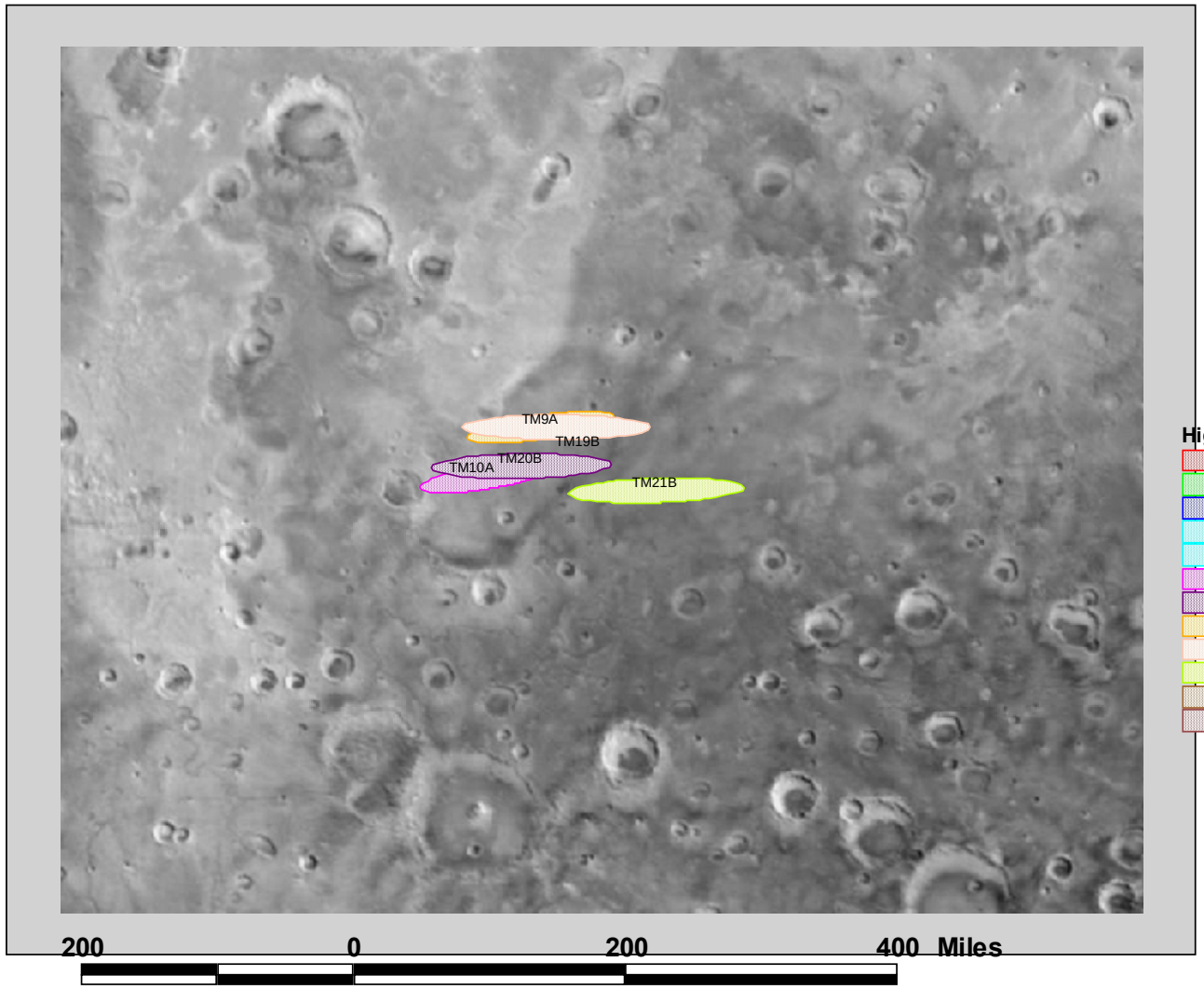
We have chosen a few potential landing sites on Mars where scientists could study the possibility of life on Mars.

Mars Site



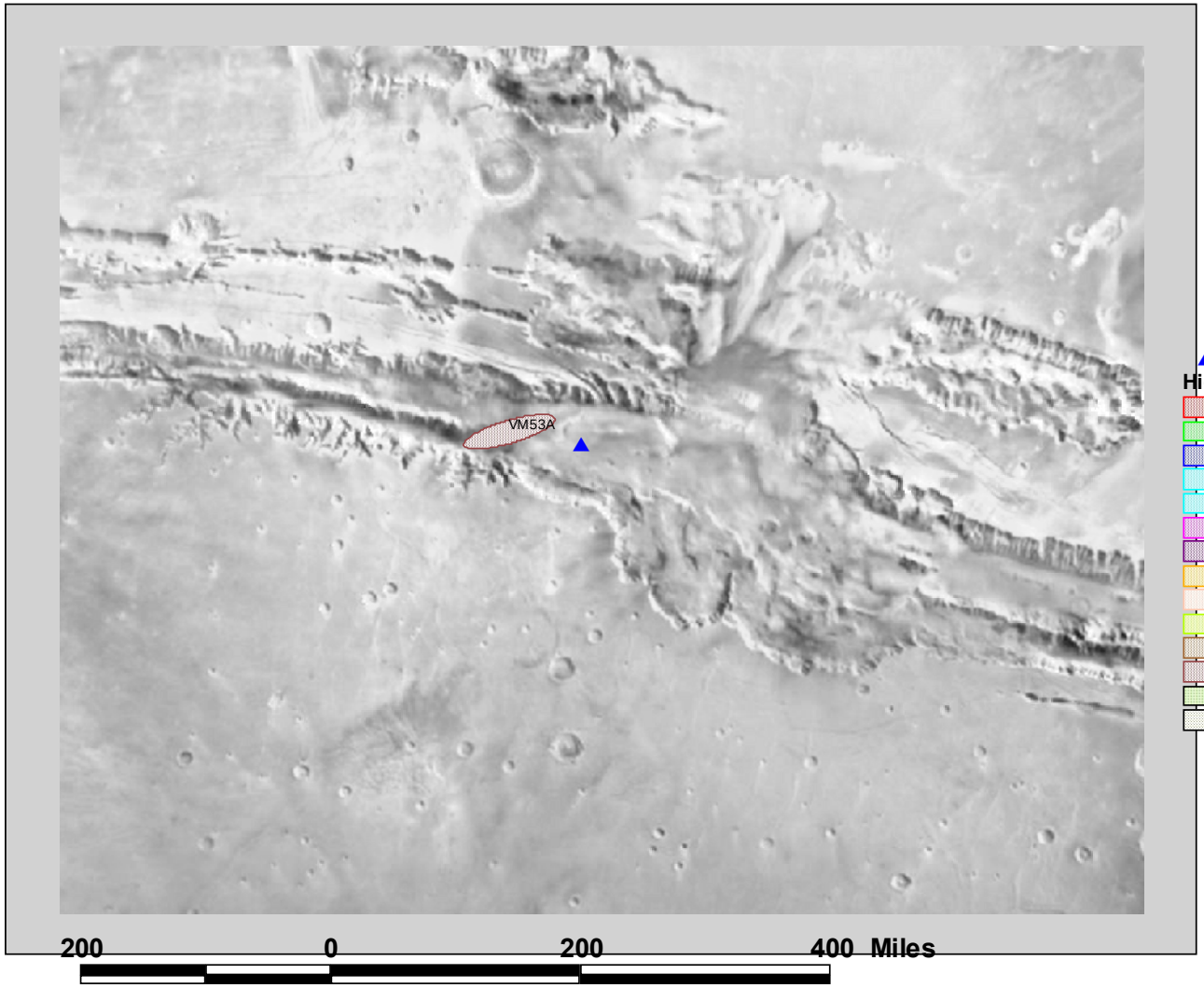
This site would be good to investigate life on Mars because the blue strip in the center is at a lower elevation than the land around it, and that could mean that it used to be a river channel. River channels mean water, and water means life.

Hematite



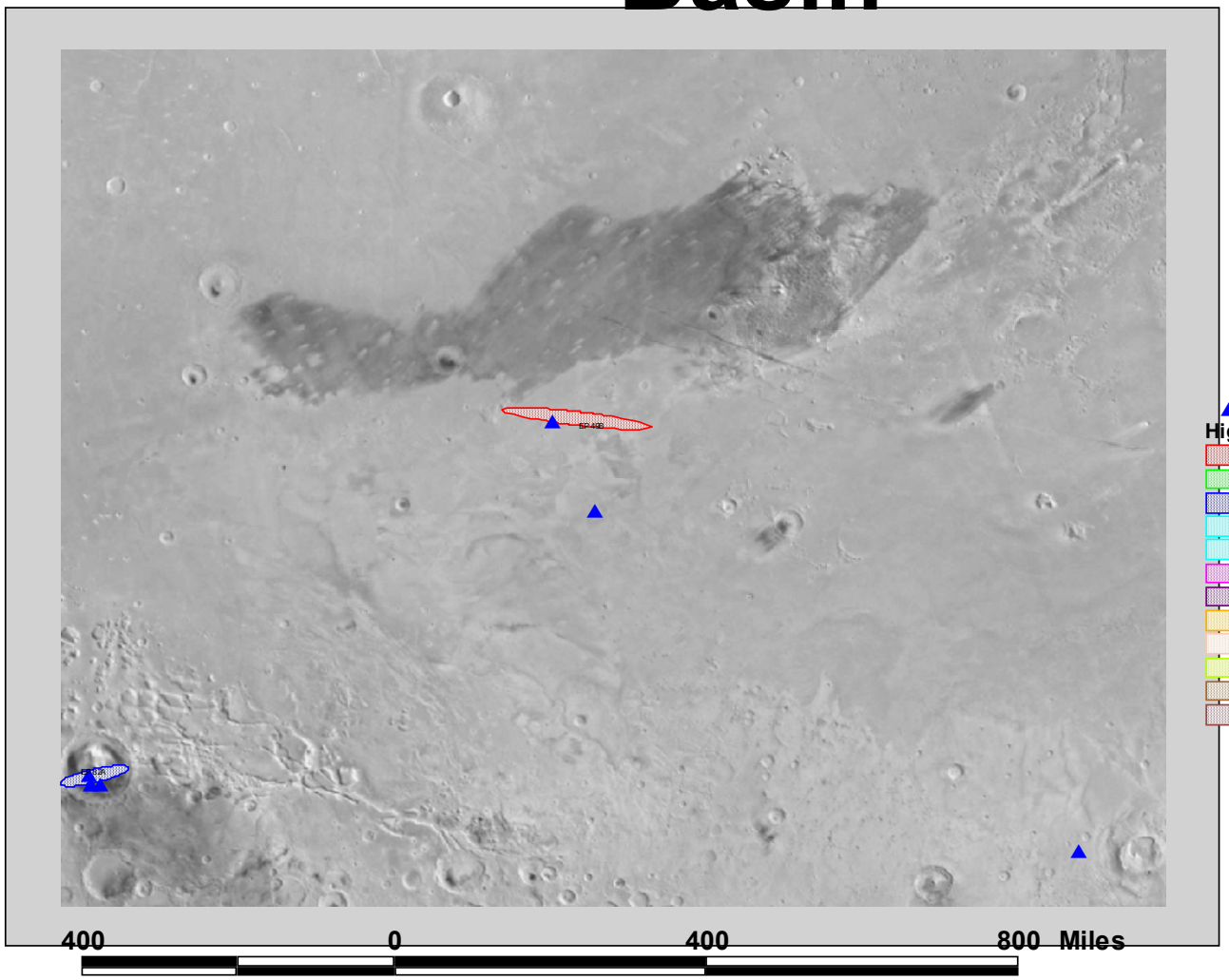
This area is also a good place to investigate life on Mars because of its high content of hematite. Hematite only forms in water, so the presence of hematite in this particular area would be a good indication that there once was water here. Again, since water is a necessity to life, this is another big clue that life existed on Mars.

Sedimentary Deposits



This is another great area to investigate life on Mars because not only does the area look like it once had flowing water, but it also contains sedimentary deposits. Since sedimentary rocks only form in a water environment, it must be true that there was once water in this area. Consequently, it must be true that there was once life in this area.

Basin



This is another potential investigation site mainly because it is located in a large basin. Not only would its flat and smooth surfaces make the rover's landing much easier, but the basin also indicates that the area once was covered in water as a lake. As we've already discussed, water means life, and a biotic community would be highly probable in an area like this.

In Conclusion…

- **The evidence is infallible. If life doesn't exist now on Mars, there has definitely been life in the past. From living conditions to resemblances of our own planet to actual material evidence, scientists at NASA have done an excellent job at proving that life on Mars is not only a possibility, it's a reality.**

Works Cited

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