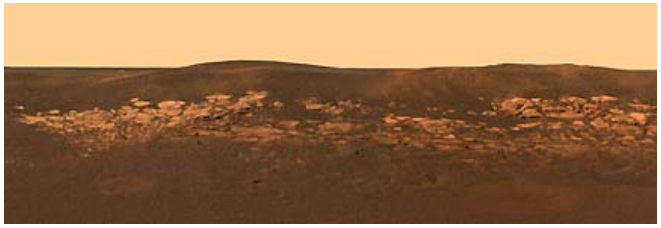
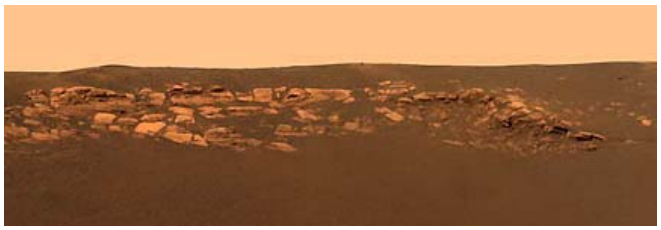
Mars - First Bedrock Seen Beyond Earth

"Look at the wonderful layer-cake structure in there. It's going to be fascinating beyond words to get up close and personal with this thing." Steve Squyres, Lead Mars Mission Scientist





Top two color segments of wide panorama image taken of "first bedrock seen on another planet beyond Earth" by the Opportunity rover from its position still inside the lander. Third black and white is a slite blow-up of the panorama for more detail. Image credit: NASA/JPL.

January 28, 2004 Pasadena, California Opportunity - so far - is operating well despite a heating problem in its robotic arm which JPL engineers are monitoring, not certain if the heat can harm the rover. But if all goes well, Opportunity is expected several days from now to roll out of its position inside the lander and out on to the hematite-rich soil of Meridiani Planum and approach the rock slabs to drill for content. Scientists believe the estimated 18-inch thick layered rocks are either volcanic ash deposits or sediments laid down by wind or water.

If these rock slabs are confirmed to be sedimentary in origin after Opportunity drills into one or more, that would provide the first up-close evidence that water was on this Meridiana Planum and therefore, Mars once upon a time had to have been a somewhat watery planet.

In the meantime, this week Opportunity is scheduled to use its mini-thermal emissions spectrometer to measure infrared radiation of the rocks to see what minerals it can detect. And 6,600 miles around on the other side of Mars in the Gusev crater, the other rover, Spirit, is slowly improving its ability to operate as

NASA/JPL scientists deleted hundreds of stored files not necessary for geology work that apparently overloaded the robot's computer and caused Spirit to stop transmitting data back on January 21, 2004.

Websites:

http://marsrovers.jpl.nasa.gov/gallery/all/opportunity.html

http://marsrovers.jpl.nasa.gov/home/index.html

http://www.esa.int/export/esaCP/index.html

http://athena.cornell.edu

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