



HiRISE Quest Spring 2008 Challenge Written Report

Name of teacher/student or class group:

1. **What HiRISE image did you choose to analyze?**

2. **Describe the area that has been imaged by HiRISE. You can do this by using some of the lower resolution Mars images* for overviews. (For example, is it part of a valley, canyon system, located in a crater, or near a volcano? What is the name of the area or feature? Is it located in the South Polar Region? Is it equatorial?) What features in the images provide clues to the type of geologic setting? Why might this be a good general area to look for evidence of water? What additional information can you find about the area on the web or in your textbooks.**

*Hint: There are many ways to do this. Easiest: Look at the lower resolution zoomable map (located on the website below the HiRISE Quest student challenge images) or the Context image map (located below the selected HiRISE image. More challenging: Log in to our image suggestion website and type in the latitude and longitude on the front main page. Or you can click on an area on the colorful Mars map to bring up a zoomable Mars map. Click the "gazetteer" and "grid" buttons at the bottom of this map to see the lat/lon and place names added. Most Challenging: You can also go to the login/image suggestion website and type in the HiRISE Image ID number to bring up the area of interest.

6. **What observations or clues in the HiRISE image at the various scales lead you to think there may or may not have been water at this location in the past? Why are they important and what can they tell you? Draw conclusions from your work. What have you learned?**

7. Now try to write a figure caption. Here are some hints:

When writing an image caption, you want to first tell the reader something about where on Mars the image is located: Is it near the North or South pole, is it in a crater, or is it in a channel or at an intersection of two valleys? You should have answered this in question 1.

Describe the features in the image. How large are the features of interest in the image? Look at the browse version of the image for an image scale. Can you see different features at different scales (try starting from the most zoomed out scale and talk about changes as you zoom in)?

Next, pick out a really interesting aspect of the image and describe it. This is a good time to have a cutout, or sub image to show, if possible. Are boulders falling down the walls leaving tracks behind them? Is the color pattern indicating that there is frost on the tips of the dunes?

Finally, try a little interpretation and give the reader the basic idea as to how this area ended up looking like it does: Did rivers flow down the walls of a volcano carrying mud and water? Did wind blow sand into large dunes in a crater floor? Did mud cracks form from the surface going through wet and dry periods?

Take a look at some of the figure captions from the last challenge, all labeled "Student Image of the Week:...". You might further explore the HiRISE website (<http://hirise.lpl.arizona.edu>) or use the HiRISE Online Image Viewer for examples that are similar to your image. Don't worry about technical jargon, just give the location, describe some interesting feature(s) in the image, and finally give some ideas as to how it might have gotten that way or how the features might have formed.

