

Curiosity rover nearing Yellowknife Bay

December 12 2012, by Guy Webster

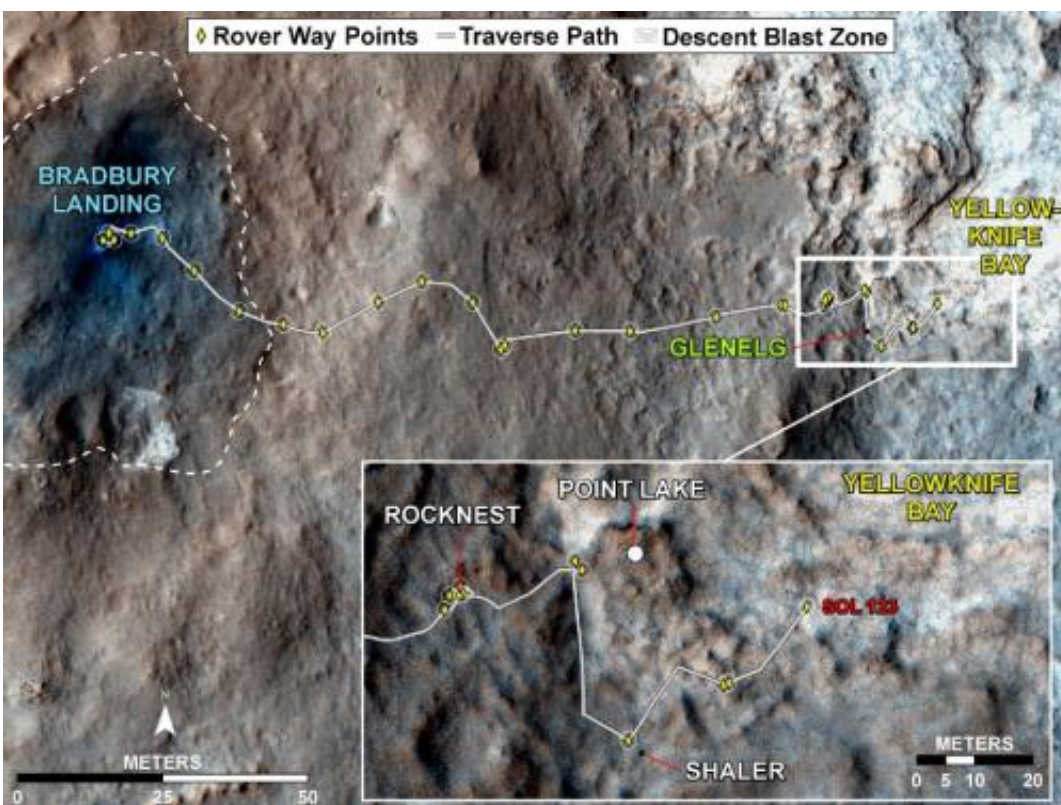


The NASA Mars rover Curiosity used its Mast Camera (Mastcam) during the mission's 120th Martian day, or sol (Dec. 7, 2012), to record this view of a rock outcrop informally named "Shaler." Credit: NASA/JPL-Caltech/MSSS

(Phys.org)—The NASA Mars rover Curiosity drove 63 feet (19 meters) northeastward early Monday, Dec. 10, approaching a step down into a slightly lower area called "Yellowknife Bay," where researchers intend to choose a rock to drill.

The drive was Curiosity's fourth consecutive driving day since leaving a site near an outcrop called "Point Lake," where it arrived last month. These drives totaled 260 feet (79 meters) and brought the mission's total [odometry](#) to 0.37 mile (598 meters).

The route took the rover close to an outcrop called "Shaler," where scientists used Curiosity's Chemistry and Camera (ChemCam) instrument and Mast Camera (Mastcam) to assess the rock's composition and observe its layering. Before departure from Point Lake, a fourth sample of dusty sand that the rover had been carrying from the "Rocknest" drift was ingested and analyzed by Curiosity's Sample Analysis at Mars (SAM) instrument.



This map traces where NASA's Mars rover Curiosity drove between landing at a site subsequently named "Bradbury Landing," and the position reached during the mission's 123rd Martian day, or sol, (Aug. 10, 2012). The inset shows the

most recent legs of the traverse in greater detail. Credit: NASA/JPL-Caltech/Univ. of Arizona

Curiosity ended Monday's drive about 30 percent shorter than planned for the day when it detected a slight difference between two calculations of its tilt, not an immediate risk, but a trigger for software to halt the drive as a precaution. "The rover is traversing across terrain different from where it has driven earlier, and responding differently," said Rick Welch, mission manager at NASA's Jet Propulsion Laboratory, Pasadena, Calif. "We're making progress, though we're still in the learning phase with this rover, going a little slower on this terrain than we might wish we could."

Curiosity is approaching a lip where it will descend about 20 inches (half a meter) to Yellowknife Bay. The rover team is checking carefully for a safe way down. Yellowknife Bay is the temporary destination for first use of Curiosity's rock-powdering drill, before the mission turns southwestward for driving to its main destination on the slope of [Mount Sharp](#).

JPL, a division of the California Institute of Technology, Pasadena, manages the [Mars Science](#) Laboratory Project and the mission's [Curiosity](#) rover for [NASA](#)'s Science Mission Directorate, Washington. JPL designed and built the rover.

Provided by NASA

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