

Image: Mars rover Curiosity scoping out next study area

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Credit: NASA/JPL-Caltech

(Phys.org) —On Wednesday, NASA's Curiosity Mars rover drove the last 98 feet (30 meters) needed to arrive at a site planned since early 2013 as a destination for studying rock clues about ancient environments that may have been favorable for life.

The rover reached a vantage point for its cameras to survey four different types of rock intersecting in an area called "the Kimberley," after a region of western Australia.

"This is the spot on the map we've been headed for, on a little rise that gives us a great view for context imaging of the outcrops at the

Kimberley," said Melissa Rice of the California Institute of Technology, Pasadena. Rice is the science planning lead for what are expected to be several weeks of observations, sample-drilling and onboard laboratory analysis of the area's rocks.

With arrival at this location, Curiosity has driven a total of 3.8 miles (6.1 kilometers) since landing inside Gale Crater on Mars in August 2012.

The mission's investigations at the Kimberley are planned as the most extensive since Curiosity spent the first half of 2013 in an area called Yellowknife Bay. At Yellowknife Bay, the one-ton rover examined the first samples ever drilled from rocks on Mars and found the signature of an ancient lakebed environment providing chemical ingredients and energy necessary for life.

At the Kimberley and, later, at outcrops on the slope of Mount Sharp inside Gale Crater, researchers plan to use Curiosity's science instruments to learn more about habitable past conditions and environmental changes.

Provided by JPL/NASA

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