

Opportunity peers out from 'Pillinger Point'

June 17 2014, by Ken Kremer



Opportunity Mars rover peers into vast Endeavour Crater from Pillinger Point mountain ridge named in honor of Colin Pillinger, the Principal Investigator for the British Beagle 2 lander built to search for life on Mars. Pillinger passed away from a brain hemorrhage on May 7, 2014. This navcam camera photo mosaic was assembled from images taken on June 5, 2014 (Sol 3684) and colorized. Credit: NASA/JPL/Cornell/Marco Di Lorenzo

NASA's decade old Opportunity rover has reached a long sought after region of aluminum-rich clay mineral outcrops at a new Endeavour crater ridge now "named 'Pillinger Point' after Colin Pillinger the Principal Investigator for the [British] Beagle 2 Mars lander", Prof. Ray Arvidson, Deputy Principal Investigator for the rover, told Universe Today exclusively. See above the spectacular panoramic view from 'Pillinger Point' – where ancient water once flowed billions of year ago.

The Beagle 2 lander was built to search for signs of life on Mars.

The Mars Exploration Rover (MER) team named the noteworthy ridge in honor of Prof. Colin Pillinger – a British planetary scientist at the

Open University in Milton Keynes, who passed away at the age of 70 on May 7, 2014.

'Pillinger Point' is a scientifically bountiful place possessing both clay mineral outcrops and mineral veins where "waters came up through the cracks", Arvidson explained to me.

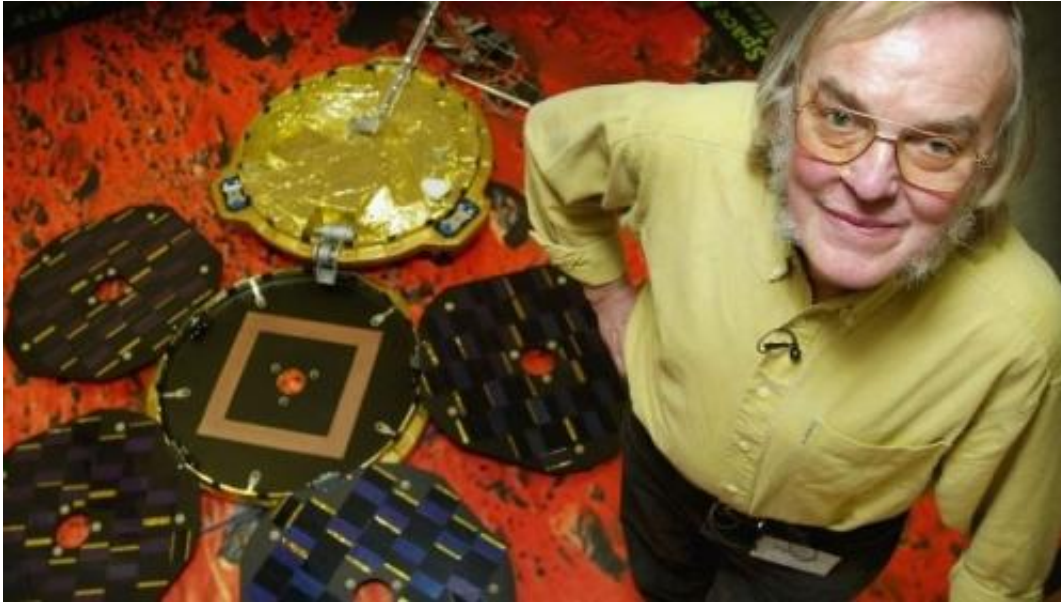
Since water is a prerequisite for life as we know it, this is a truly fitting tribute to name Opportunity's current exploration site 'Pillinger Point' after Prof. Pillinger.

See our new photo mosaic above captured by Opportunity peering out from 'Pillinger Point' ridge on June 5, 2014 (Sol 3684) and showing a panoramic view around the eroded mountain ridge and into vast Endeavour crater.

The gigantic crater spans 14 miles (22 kilometers) in diameter.

See below our Opportunity 10 Year traverse map showing the location of Pillinger Point along the segmented rim of Endeavour crater.

Pillinger Point is situated south of Solander Point and Murray Ridge along the western rim of Endeavour in a region with caches of clay minerals indicative of an ancient Martian habitable zone.



British planetary scientist Colin Pillinger with the Beagle 2 lander.

For the past several months, the six wheeled robot has been trekking southwards from Solander towards the exposures of aluminum-rich clays – now named Pillinger Point- detected from orbit by the CRISM spectrometer aboard NASA's powerful Martian 'Spysat' – the Mars Reconnaissance Orbiter (MRO) – while gathering context data at rock outcrops along the winding way.

"We are about 3/5 of the way along the outcrops that show an Al-OH [aluminum-hydroxyl] montmorillonite [clay mineral] signature at 2.2 micrometers from CRISM along track oversampled data," Arvidson told me.

"We have another ~160 meters to go before reaching a break in the outcrops and a broad valley."

The rover mission scientists ultimate goal is travel even further south to 'Cape Tribulation' which holds a motherlode of the 'phyllosilicate' clay

minerals based on extensive CRISM measurements accomplished earlier at Arvidson's direction.

"The idea is to characterize the outcrops as we go and then once we reach the valley travel quickly to Cape Tribulation and the smectite valley, which is still ~2 km to the south of the present rover location," Arvidson explained.

Mars Express and Beagle 2 were launched in 2003, the same year as NASA's twin rovers Spirit and Opportunity, on their interplanetary voyages to help unlock the mysteries of Mars potential for supporting microbial life forms.

Pillinger was the driving force behind the British built Beagle 2 lander which flew to the Red Planet piggybacked on ESA's Mars Express orbiter. Unfortunately Beagle 2 vanished without a trace after being deployed from the orbiter on Dec. 19, 2003 with an expected air bag assisted landing on Christmas Day, Dec. 25, 2003.

In an obituary by the BBC, Dr David Parker, the chief executive of the UK Space Agency, said that Prof. Pillinger had played a critical role in raising the profile of the British space programme and had inspired "young people to dream big dreams."



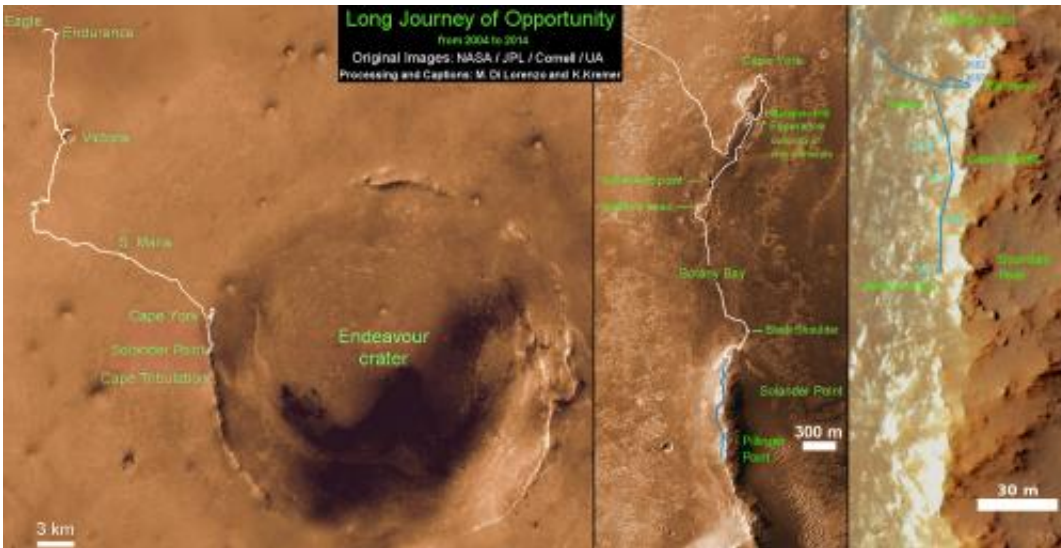
NASA's Opportunity Mars rover captures sweeping panoramic vista near the ridgeline of 22 km (14 mi) wide Endeavour Crater's western rim. The center is southeastward and also clearly shows the distant rim. See the complete panorama below. This navcam panorama was stitched from images taken on May 10, 2014 (Sol 3659) and colorized. Credit: NASA/JPL/Cornell/Marco Di Lorenzo/Ken Kremer

During his distinguished career Pillinger also analyzed lunar rock samples from NASA's Apollo moon landing missions and worked on ESA's Rosetta mission.

"It's important to note that Colin's contribution to planetary science goes back to working on Moon samples from Apollo, as well as his work on meteorites," Dr Parker told the BBC.

Today, June 16, marks Opportunity's 3696th Sol or Martian Day roving Mars – compared to a warranty of just 90 Sols.

So far she has snapped over 193,400 amazing images on the first overland expedition across the Red Planet.



Traverse Map for NASA’s Opportunity rover from 2004 to 2014 – A Decade on Mars This map shows the entire path the rover has driven during a decade on Mars and over 3692 Sols, or Martian days, since landing inside Eagle Crater on Jan 24, 2004 to current location along Pillinger Point ridge south of Solander Point summit at the western rim of Endeavour Crater and heading to clay minerals at Cape Tribulation. Opportunity discovered clay minerals at Esperance – indicative of a habitable zone. Credit: NASA/JPL/Cornell/ASU/Marco Di Lorenzo/Ken Kremer

Her total odometry stands at over 24.51 miles (39.44 kilometers) since touchdown on Jan. 24, 2004 at Meridiani Planum.

Meanwhile on the opposite side of Mars, Opportunity's younger sister rover Curiosity is trekking towards gigantic Mount Sharp after drilling into her 3rd Red Planet rock at Kimberley.

Source: [Universe Today](#)

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