

- We have positive confirmation of a safe landing.

- We're seeing it on the LCP.

[wild celebration]

[indistinct chatter]

John Callas: Opportunity hit a hole-in-one when she landed. The airbag system rolled into this small crater called Eagle crater. And when the rover first turned on its cameras, it saw that the rim of this small crater was lined with exposed bedrock.

Steve Squyres: So, we took out our microscope for the first time and we took a picture and the surface of Mars at that location is littered with an uncountable number of little round things...

Abigail Fraeman: ...that were called blueberries because they looked like blueberries in a muffin. What we discovered was that those are features that form in water and they were a really definitive sign that there had been liquid water on the surface of Mars some time in the past.

Callas: You know, after we left Eagle crater we went to Endurance crater and that's the crater we drove down in. And there we did the what the geologists call an in sequence stratigraphic section, which is essentially reading the chapters of the Martian history book in reverse order.

Matt Golombek: That rover became a stratigrapher. First time we had a stratigrapher on Mars. We knew we wanted to go after Endurance to Victoria.

Callas: We put the pedal to the metal, and we started heading there, tens of kilometers away. We had to literally surf across these dunes of windblown material, and the rover got stuck in one of those. We had to get the rover unstuck. What we found is the best way to get it out is just to put it in reverse and gun it. The rover eventually popped out. And, so we changed our driving strategy. So we recognized these ripples as hazards. We get to this giant half-mile diameter crater-- Victoria crater--and we want to figure out, "Gee, how can we go into this thing?"

Golombek: All of a sudden, we got HiRISE images. We could see the rover in the image.

Squyres: That was the very first image that we got from space showing one of our rovers.

Golombek: We spent a year scouting the edge of that crater to decide where we wanted to go in to get the best stratigraphic section.

Callas: We found a place to go in, and we drove down in and we spent about a year inside Victoria crater.

Heather Justice: The science team was really excited about the idea of driving to Endeavor Crater...over 20 km away. This is a long drive to do. It was gonna take multiple years, but they decided to do it anyways.

Callas: There were too many of these dangerous ripples in our way, and we actually had to take this circuitous route that at times took us away from the crater only to then cut back and then approach it more directly.

Justice: And then we pull up to Endeavor crater and all of a sudden there's all these new things to look at.

Fraeman: We first discovered the Homestake vein. It was this very, very bright linear feature. It turns out that it was a big gypsum vein, and we see these gypsum veins now all over. So, it was our first taste of what is a really important process on Mars.

Justice: We were driving to a valley and along the way there we realized that right about the point where we were about to get to this valley, that was when we were gonna cross the marathon mark. So we said, "well, that's cool, we're just going to name this valley after that, call it Marathon Valley." That was when we reached the distance of a marathon, 26.2 miles, on another planet. We continued driving through some slopes down, a little bit on the interior of the crater rim until we came back out so that we could continue onto the next valley, Perseverance Valley...

Golombek: ...where the rover was exploring when we lost contact.

Fraeman: We said, "We're gonna operate this vehicle until the day where we can't," and that's exactly what we did, and I'm really proud.

Callas: We've set a foundation that will serve as the basis for future exploration.