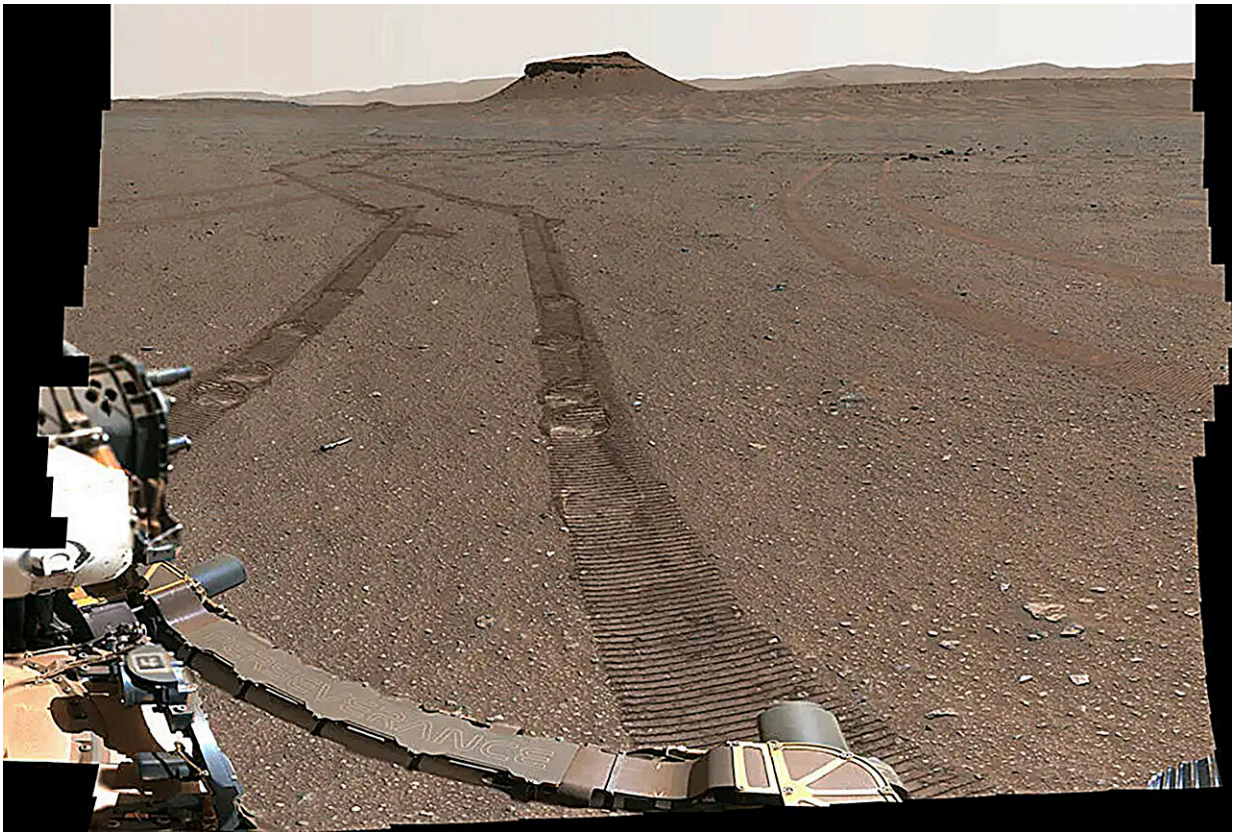
# NASA proposes cheaper, quicker way to get Mars rocks and soil to Earth

January 7 2025, by Marcia Dunn



This image provided by NASA shows Perseverance rover capturing a portrait of its recently completed sample depot using its Mastcam-Z camera on Jan. 31, 2023. Credit: NASA/JPL-Caltech/ASU/MSSS via AP

NASA is pitching a cheaper and quicker way of getting rocks and soil

back from Mars, after seeing its original plan swell to $11 billion.

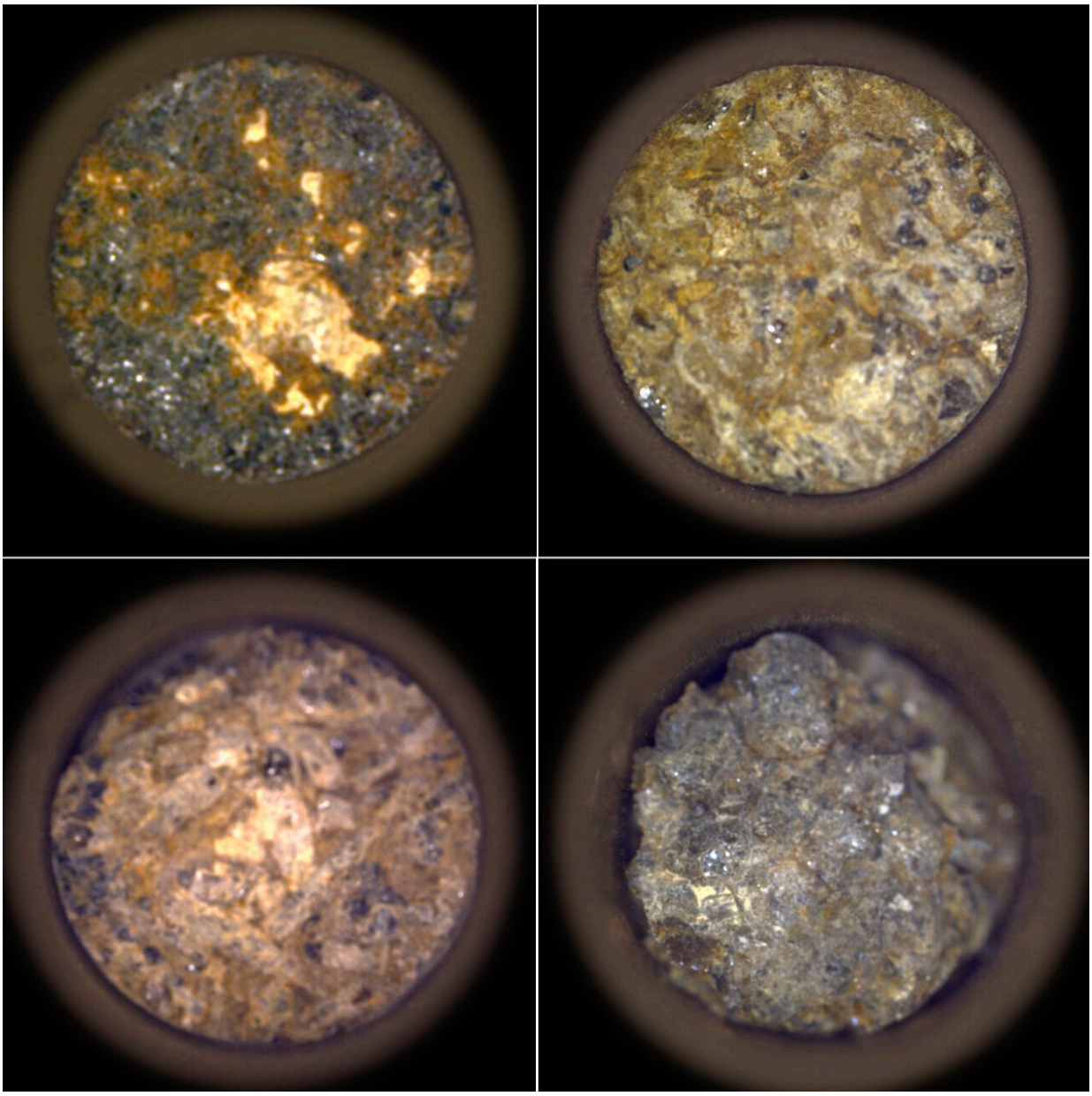
Administrator Bill Nelson presented a revised scenario Tuesday, less than two weeks before stepping down as NASA's chief when President-elect Donald Trump is inaugurated.

Nelson said he "pulled the plug" months ago on the original sample return plan given the soaring costs and the delay in getting anything back from Mars before 2040.

NASA last year asked industry and others to come up with better options to ensure the samples collected in cigar-size tubes by NASA's Perseverance rover arrive here in the 2030s, well ahead of astronauts venturing to the red planet.

"We want to return 30 titanium tubes as soon as possible at the cheapest price," Nelson said.

The space agency said it is considering two options that would cost in the $6 billion to $7 billion range, including one that would feature innovative designs by commercial partners. The number of spacecraft and launches would remain the same, but NASA said the proposed options would streamline the mission.



This photo combo from images provided by NASA shows Perseverance rover's Martian rock sample collection, top from left, acquired Sept. 8, 2021, acquired Dec. 22, 2021. Bottom from left: acquired Jan. 31, 2022, acquired Nov. 24, 2021. Credit: NASA via AP

A final decision would come next year, following engineering studies

laying out the details of each option. The more traditional alternative would use the same landing method that lowered NASA's Perseverance and Curiosity rovers onto the Martian surface—a rocket-steered platform known as a sky crane. The second option would include a landing system developed by private companies; details were short on this path during the latest update.

Perseverance has collected more than two dozen samples since its 2021 landing, with more to come in NASA's high-priority search for signs of ancient, microscopic Martian life. Scientists want to analyze the samples from the red planet's long-dry river delta in labs on Earth.

NASA officials stressed that both options would simplify things by having the sample tubes cleaned on the surface of Mars, versus in the returning spacecraft, and switching from solar to nuclear power in order to endure Martian dust storms.

Nelson said it will be up to the incoming administration to decide how best to retrieve the Mars samples, with the need for money to start flowing now to accomplish it. For Nelson's replacement, Trump has nominated tech billionaire Jared Isaacman, who's rocketed into orbit twice on his own dime.

"What we wanted to do was to give them the best possible options so that they can go from here," Nelson said.



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