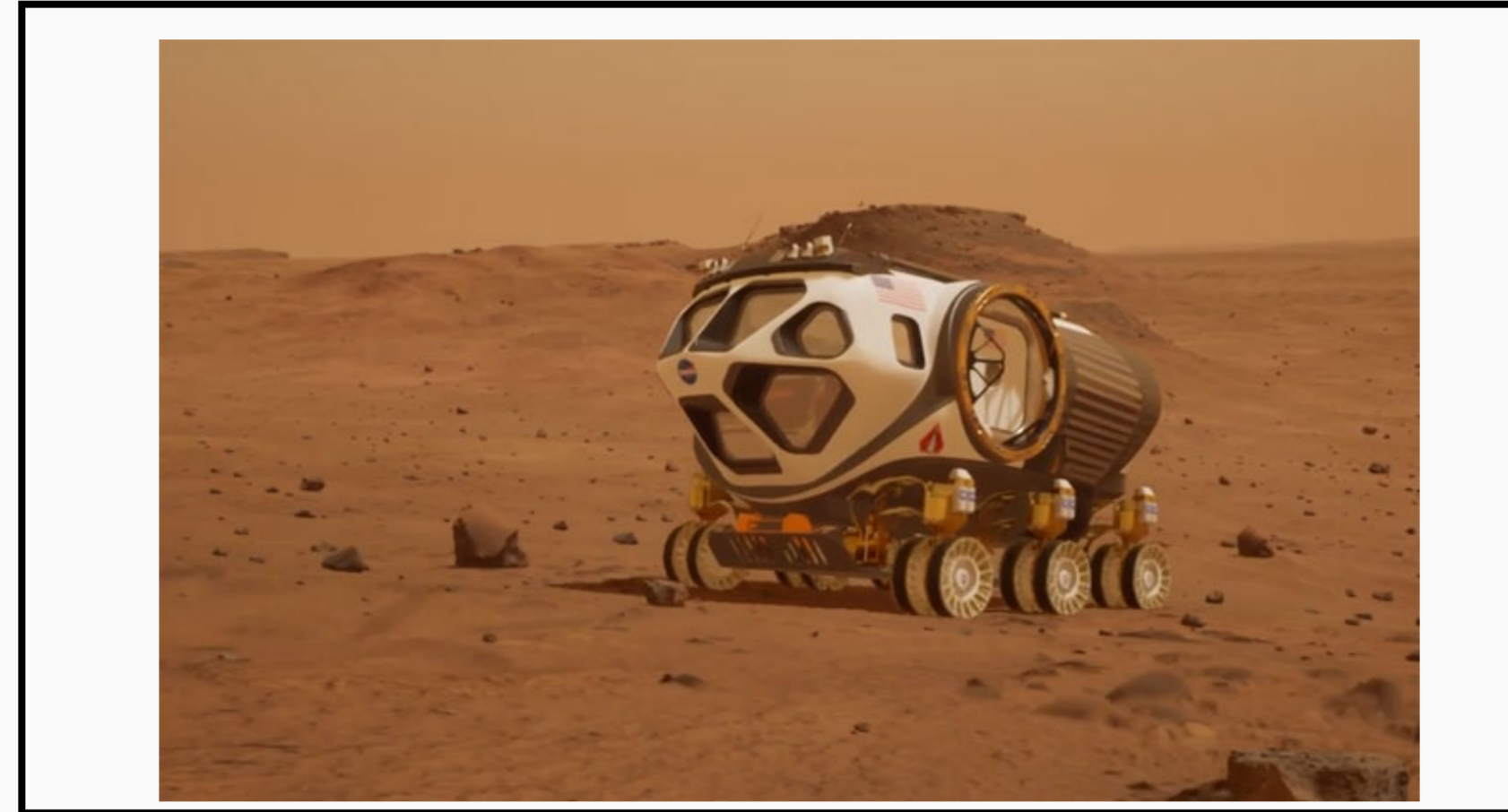


[Team Flying Echelon, Stormy Collection Scenario]

Storyboard Title, Sequence, & Description

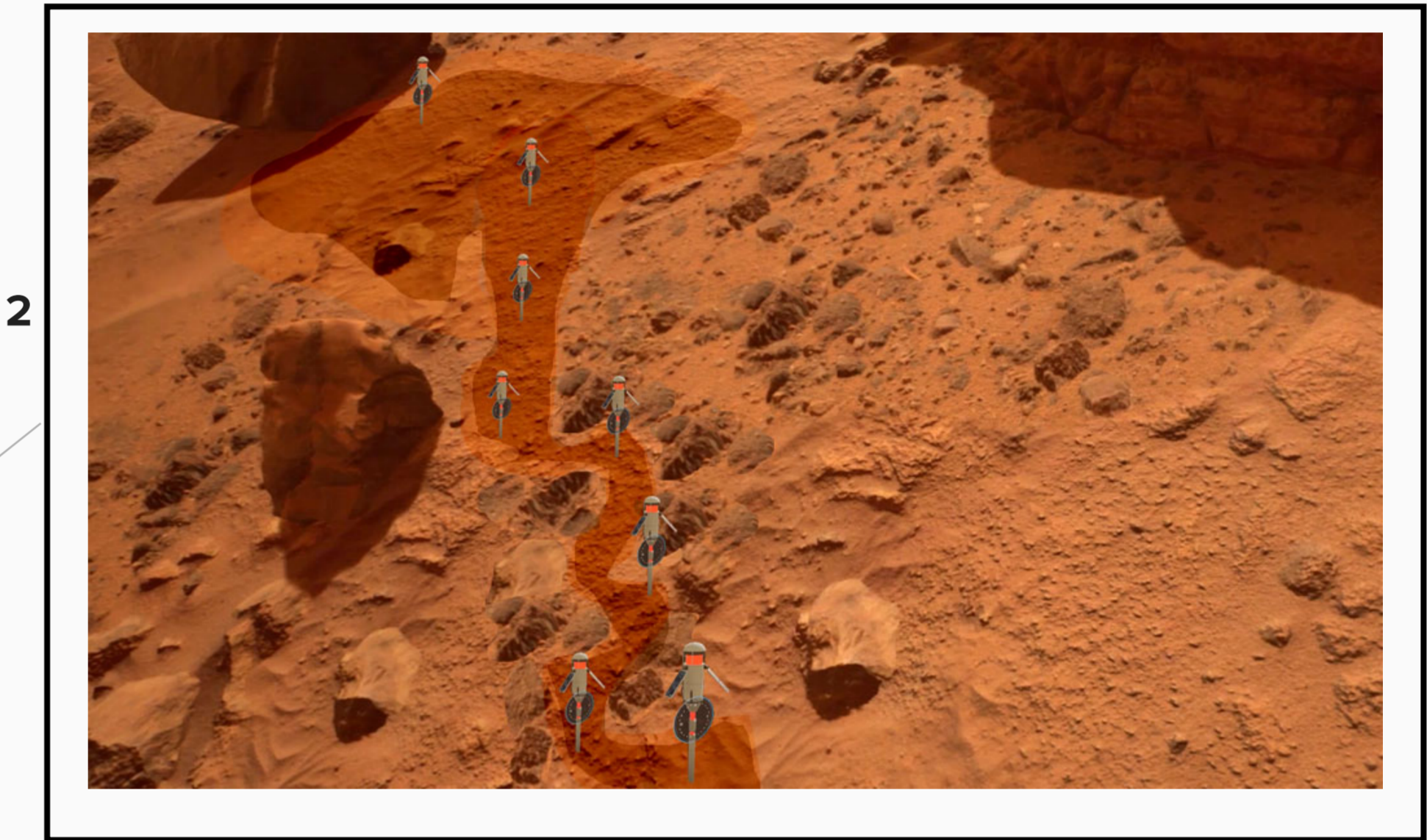
In the **Stormy Collection** scenario, a Mars Ingenuity-type helicopter drone has located a promising rock sample with an interesting coloration. It is located far enough away from the habitat module that a team will need to use the MM SEV to reach the area. However, the area immediately around the sample is filled with jagged rocks and deep sand, so the final navigation to the site will need to be done using EVA suits. Further complicating matters is the fact that a massive dust storm is predicted in the area which will severely reduce visibility and potentially rebury the sample. Collectors will need to carefully and quickly traverse the terrain outside the vehicle to find a safe path to the sample, marking their route with waypoints to assist their return trip should the expected storm produce adverse conditions.

5



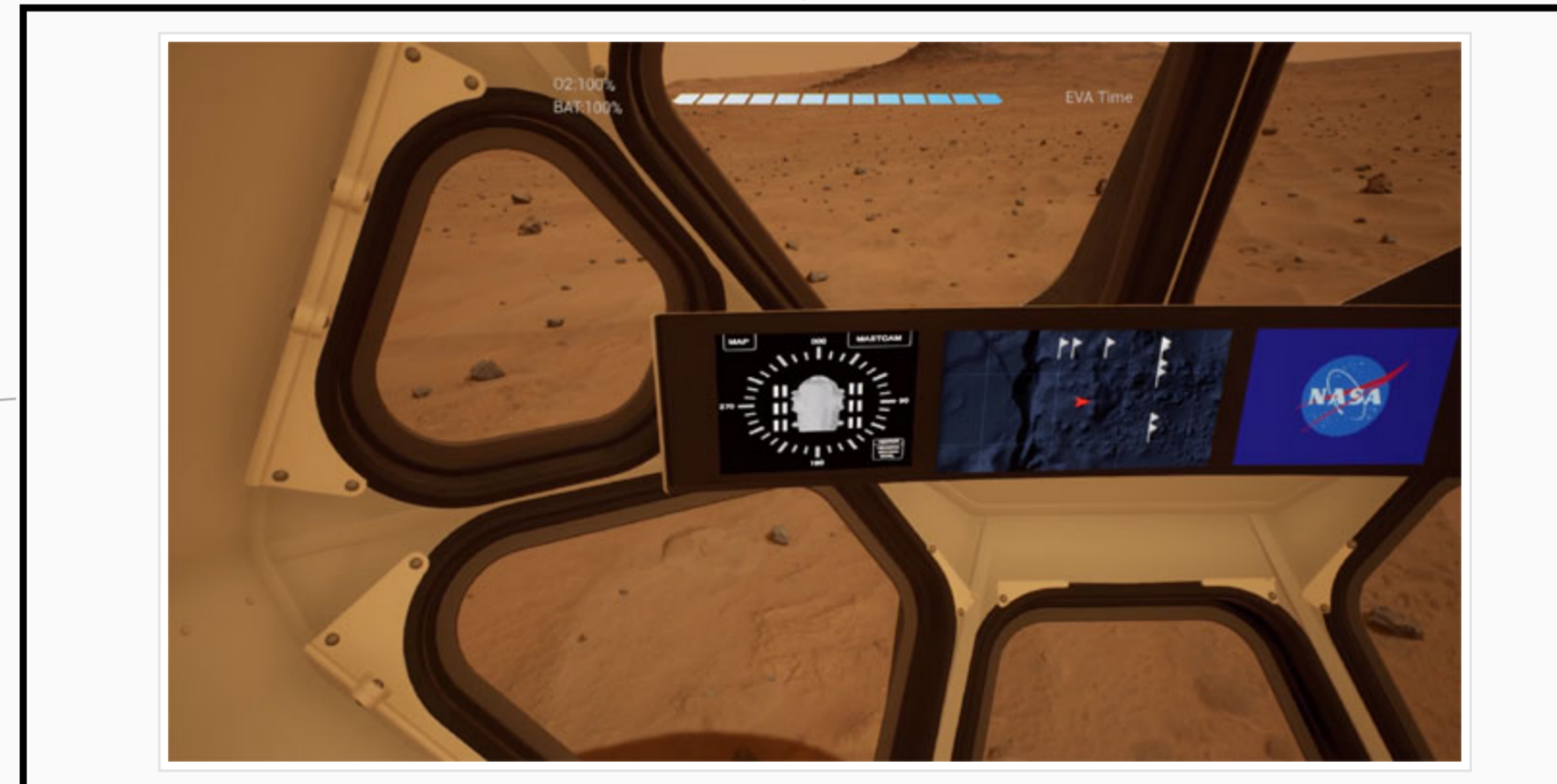
Assets Available in this Storyboard

- MM SEV
- EVA Suit
- Slide hammer
- Pipe drill/drive tube
- Deployable waypoint devices
- Notebook for notetaking and pen
- Cart/wagon used for transporting tools and samples
- EVA suit repair kit



2

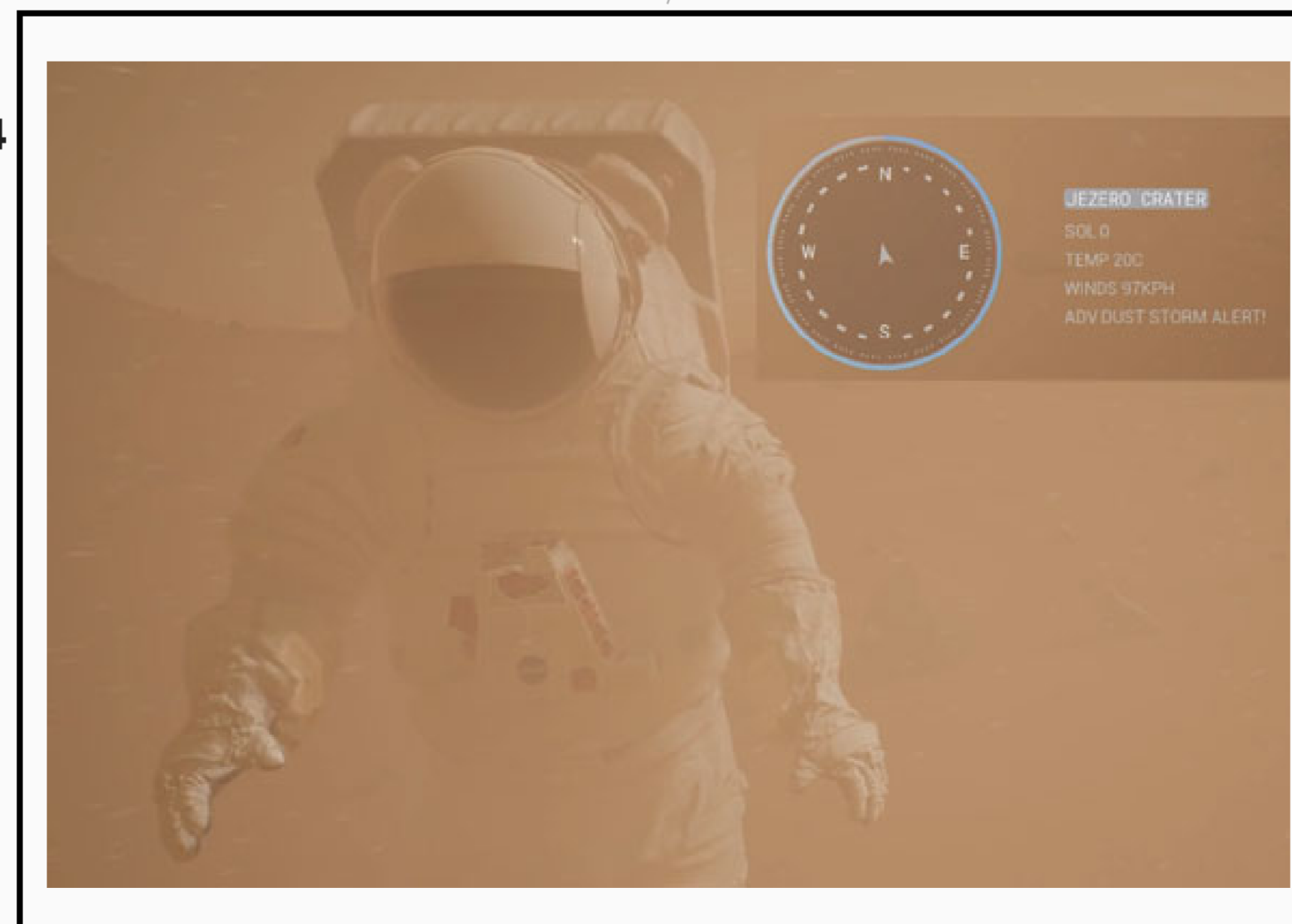
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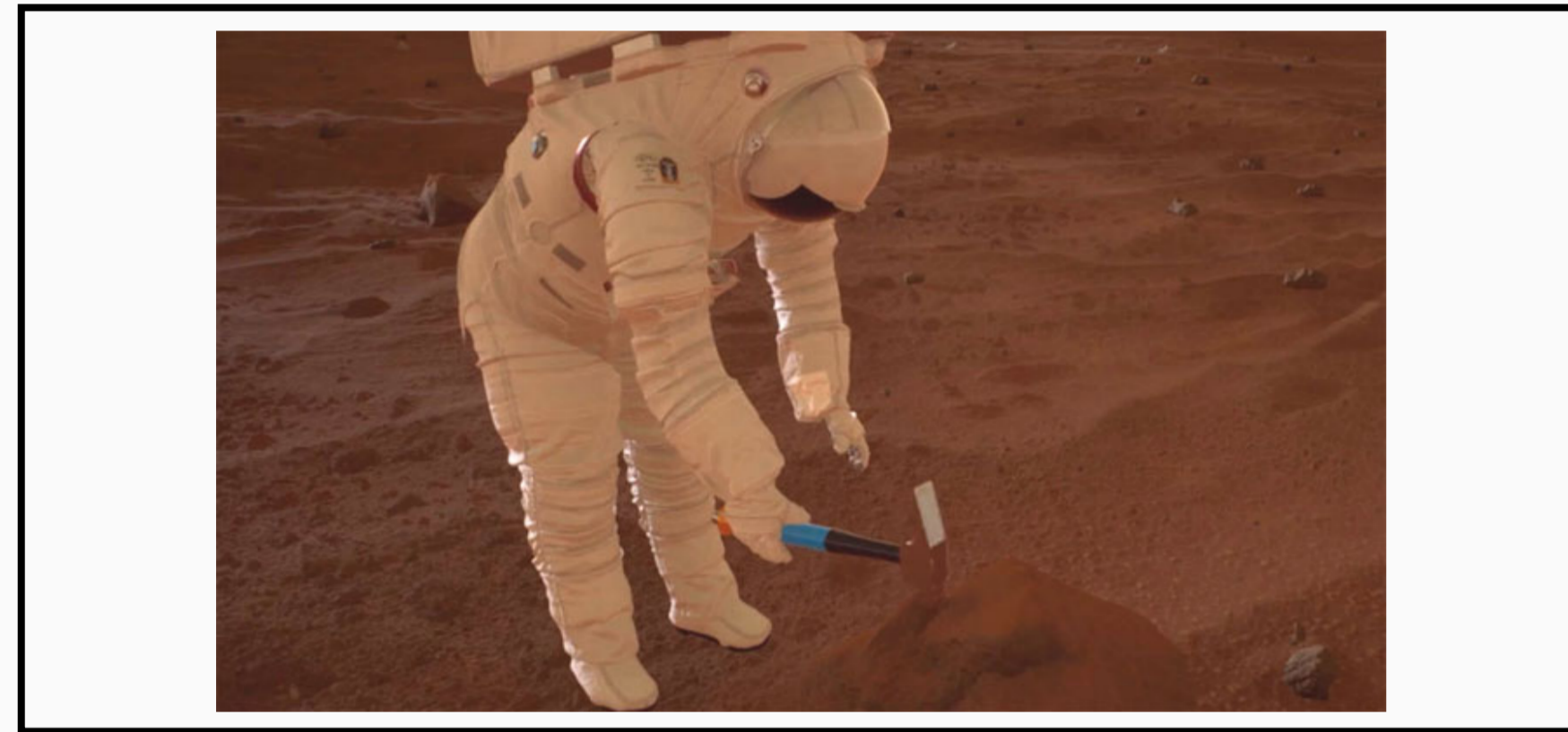
Frame Descriptions

- 1 Collection team will navigate the MM SEV to sample location, parking as close as possible without entering hazardous field
- 2 Team members will carefully find a safe route to targeted sample on foot using EVA suits, transport a cart with tools, and mark the safe path using deployable waypoint devices
- 3 Team will use slide hammer and pipe drill to collect samples while dust storm rolls in. Samples will be placed in transport wagon.
- 4 Due to very-low visibility, collection team will need to use previously deployed waypoints to travel safely back to MM SEV with sample/tool wagon during storm.
- 5 Any team member who strayed off the safe path will have a slow leak develop in their EVA suit which will need to be fixed. Samples also need to be safely stored before driving MM SEV back to base.

4



3



Actions Executable in this Storyboard

- Navigate MM SEV toward sample collection area
- Park MM SEV close to jagged rock field without entering it
- Carefully find a safe path through hazardous field on foot using EVA suits
- Deploy waypoints along safe path for return trip
- Use slide hammer and pipe drill to collect samples
- Record sample observations in notebook
- Place samples and tools in cart/wagon
- Navigate safely back to MM SEV in low-visibility conditions using waypoints
- Troubleshoot and fix leaks in spacesuit (if anyone strayed from the safe path into hazardous area)
- Secure samples inside MM SEV and return to base