

A. Prime Mission Assessment

For each landing site, evaluate the following criteria specifically in reference to the science that could be completed in the first 1.25 Mars years on the surface. Do not include extended mission opportunities in this part of your evaluation.

Criterion 1 (In-Situ Science):

The landing site includes an astrobiologically-relevant ancient environment and has geologic diversity with the potential to yield fundamental scientific discoveries when it is a) characterized for the processes that formed and modified the geologic record; and b) subjected to astrobiologically-relevant investigations (e.g., assessment of habitability and biosignature preservation potential). (scoring: 1=low potential, 5=high potential)

Criterion 2 (Returnable Cache Science):

A rigorously documented and returnable cache of rock and regolith samples assembled at this site has the potential to yield fundamental scientific discoveries if returned to Earth in the future. (scoring: 1=low potential, 5=high potential)

Criterion 3:

There is confidence in the assumptions, evidence, and any interpretive models that support the assessments for Criteria 1 and 2 for this site. (scoring: 1=low confidence, 5=high confidence).

B. Extended Mission Scenario Assessment

For each of the extended mission scenarios described at the workshop, evaluate the following criteria specifically in relation to the scientific knowledge and samples that would occur in the extended mission *beyond what is likely to be obtained in the first 1.25 Mars years*. Stated differently, evaluate the incremental scientific benefit of each extended mission scenario.

Criterion 1 (In-Situ Science):

The extended mission scenario has the potential to yield fundamental additional scientific discoveries using the rover payload. (scoring: 1=low potential, 5=high potential)

Criterion 2 (Returnable Cache Science):

Rock and regolith samples assembled in the extended mission have the potential to yield fundamental additional scientific discoveries if returned to Earth in the future. (scoring: 1=low potential, 5=high potential)

Criterion 3:

There is confidence in the assumptions, evidence, and any interpretive models that support the assessments for Criteria 1 and 2 for the extended mission. (scoring: 1=low confidence, 5=high confidence).