FIDO Landing Site Region:
Observations / Interpretations / Testable Hypotheses

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NOTE: These observations, interpretations, and testable hypotheses were based only on the MDIM simulation image (180 m/p) of the FIDO landing site region. As new material is posted I will update my work.

Observations:
Overall this region appears to contain relatively flat lying rock units with several channels dissecting the region. The overall landscape appears to exhibit a cliff and ledge forming member morphology. The edges of some rock units also exhibit a featheredge margin. In places there appears to be a darker unit covering the lighter toned rock units. Smaller channels trend mainly NE to SW while the largest channel is aligned mostly north to south. The large channel is also more sinuous than the smaller channels. There is also a finer scale linear pattern visible. These features trend NE to SW. See annotated image for locations of features.

Interpretations:
Rocks:
The flat lying rock units (oldest rocks) are interpreted to be (monocline) layered sedimentary rock units forming plateaus and mesas composed of various strength rocks. The reason for this is because the rocks exhibit a cliff and ledge member morphology. These rocks also have featheredge margins which reflect erosional processes of rocks of varying resistances. The darker overlying (younger rocks) units are interpreted to be lava flows based on their lobate appearance and color. Flow fronts appear to be visible in places. These lava flows appear to postdate the large sinuous channel because they flow down into the channel.

Channels:
Several channels are visible in the region. These channels are probably mainly structurally controlled. The smaller channels trend NE to SW and do not appear as sinuous, deep or wide as the main north to south trending channel. The large sinuous channel also appears to be much more entrenched into the surrounding rocks because some tight (goosenecks) meander bends are visible.

Small scale linear features:
These NE to SW trending fine scale features are interpreted to be linear dunes and possibly yardangs. These aeolian features would be the youngest features in the region and may either reflect present day dominant wind regimes or paleowind patterns.

Testable Hypotheses:
1. Are the rocks flat lying layered materials and if so are they sedimentary, volcanic, both? (Pancam/MiniTES)
2. What are the various types (composition, morphology, size, sorting, distribution etc.) of rocks/sediments present? (Pancam/MiniTES/MI/RAT/Mb/APXS)
3. Is landscape erosional, depositional? Aeolian, fluvial, lacustrine etc.? (Pancam/MI/RAT)