

Criteria

Create a PowerPoint summarizing the geologic history of the surface seen in each of the three Asteroid 101 images from Part 5, Exercise 2. What geologic features are present? How did they form? How old are they relative to each other and how do you know that?

Image One



What geological features are present? The only obvious features not using infrared are the boulders like the one found at the end of the far right.

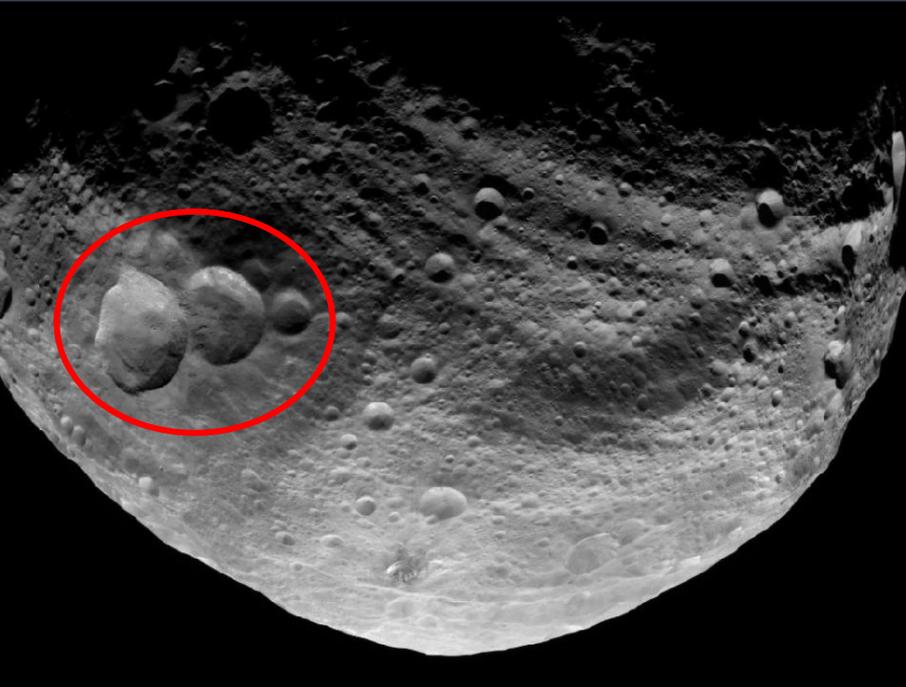
How did they form?

The forming of the asteroid happened by two different asteroids colliding which is determined by the indentations near the middle. Also, the asteroid seems to change direction at these indentations.

How old are they relative to each other and how do you know that?

In image one, the asteroid is much younger than the asteroid in image two. You can tell the age difference by looking at the cratering on image two. The shaping and the lack of cratering on image one makes it known that image one is much younger than image two.

Image Two



What geological features are present and how did they form?

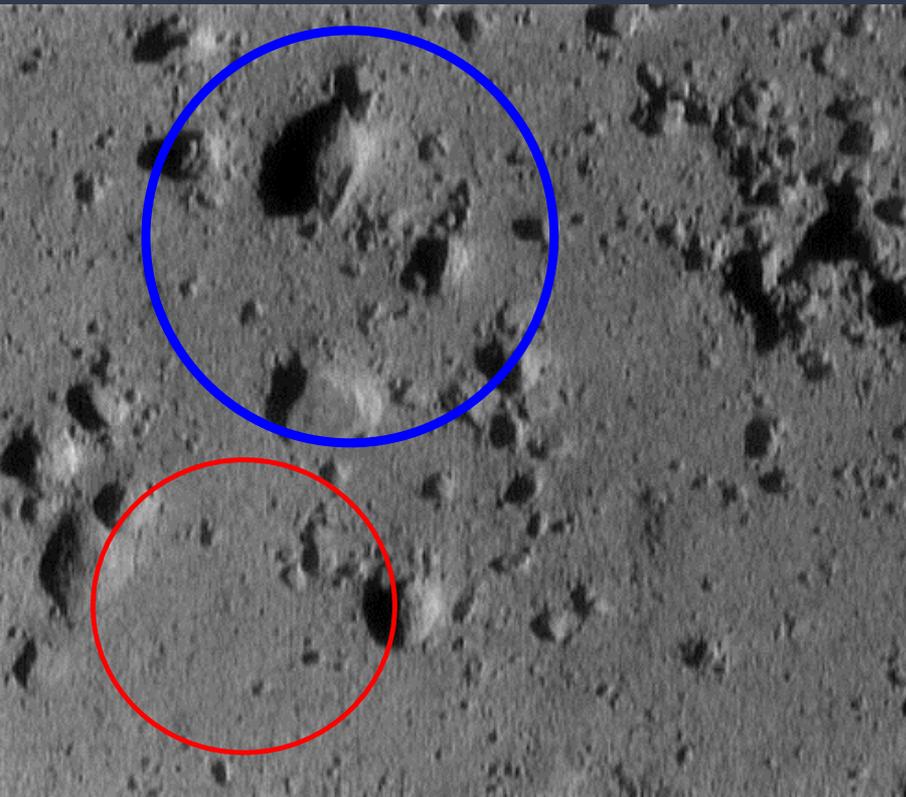
The first distinguished characteristics noted are the craters shown here. Rather large, they take up a portion of the area. Collisions from meteorites and asteroids formed cratering. The Earth has similar craters, but erosion has wiped away most.

The darker region in this photo in the upper portion could possibly be lighting, or an actual darker composition.

How old are they relative to each other and how do you know?

Image Two seems to be much older than Image One because of the presence of cratering.

Image Three



What geological features are present?

Boulders (blue circle) and a layer of regolith (red circle).

How did they form?

The regolith formed due to constant impacts. The boulders formed when portions of large impactors broke off into smaller pieces and do not have the size or speed to leave a crater so they just attach to the sides.

How old are they relative to each other and how do you know that?

The regolith is older than the boulders because the regolith is part of the surface of the asteroid and boulders are additions to the surface.

Cited Sources:

<https://www.lpi.usra.edu/exploration/education/hsResearch/presentations/2016-2017/>

https://www.lpi.usra.edu/exploration/education/hsResearch/asteroid_101/