

# Lincoln High School

## Lunar Image Analysis

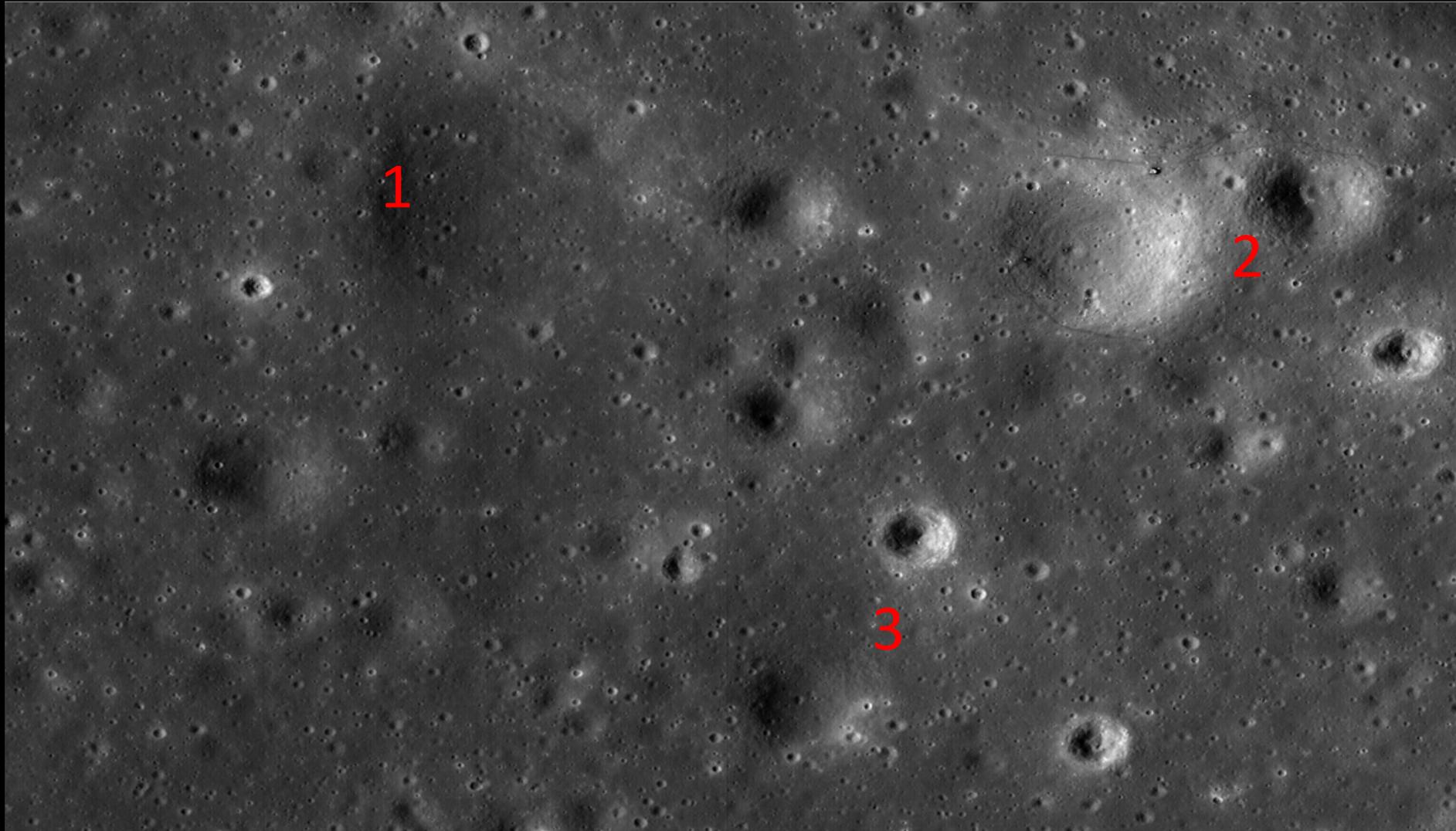
*Moon 101*



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# Image One

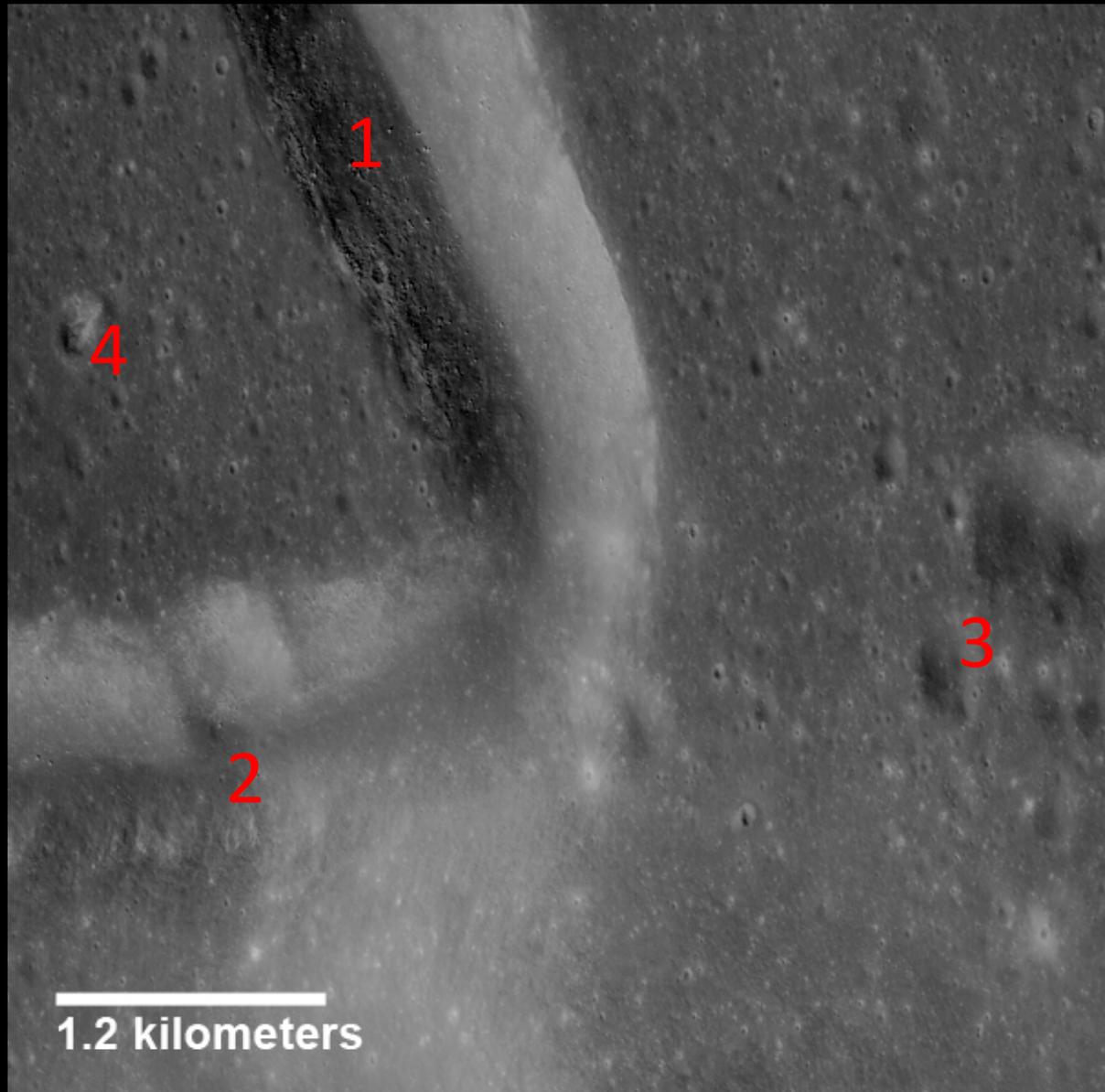


# Image One Analysis

- 1. *Impact Crater*—About 150 meters in diameter. No pronounced borders/edges. Nearly completely filled in, which indicates that it is older than the other craters in the image. We can also conclude from this that the image is of the earlier phases of the heavy bombardment period. (about 4 bya)
- 2. *Mounds*—Composed of aluminum and silicates. Actually raised to point of rising above ground-level. (Perhaps a volcano outside of the image spewed matter, or this is impact crater projectile.)
- 3. *Impact Crater*—Shadowing indicates that these craters are deep; source of craters were either heavy or high velocity. Probably youngest craters in image; formed in late heavy bombardment period. (about 3.8 bya)

*Conclusion: Image 1 is of the far side of the Moon.*

# Image 2

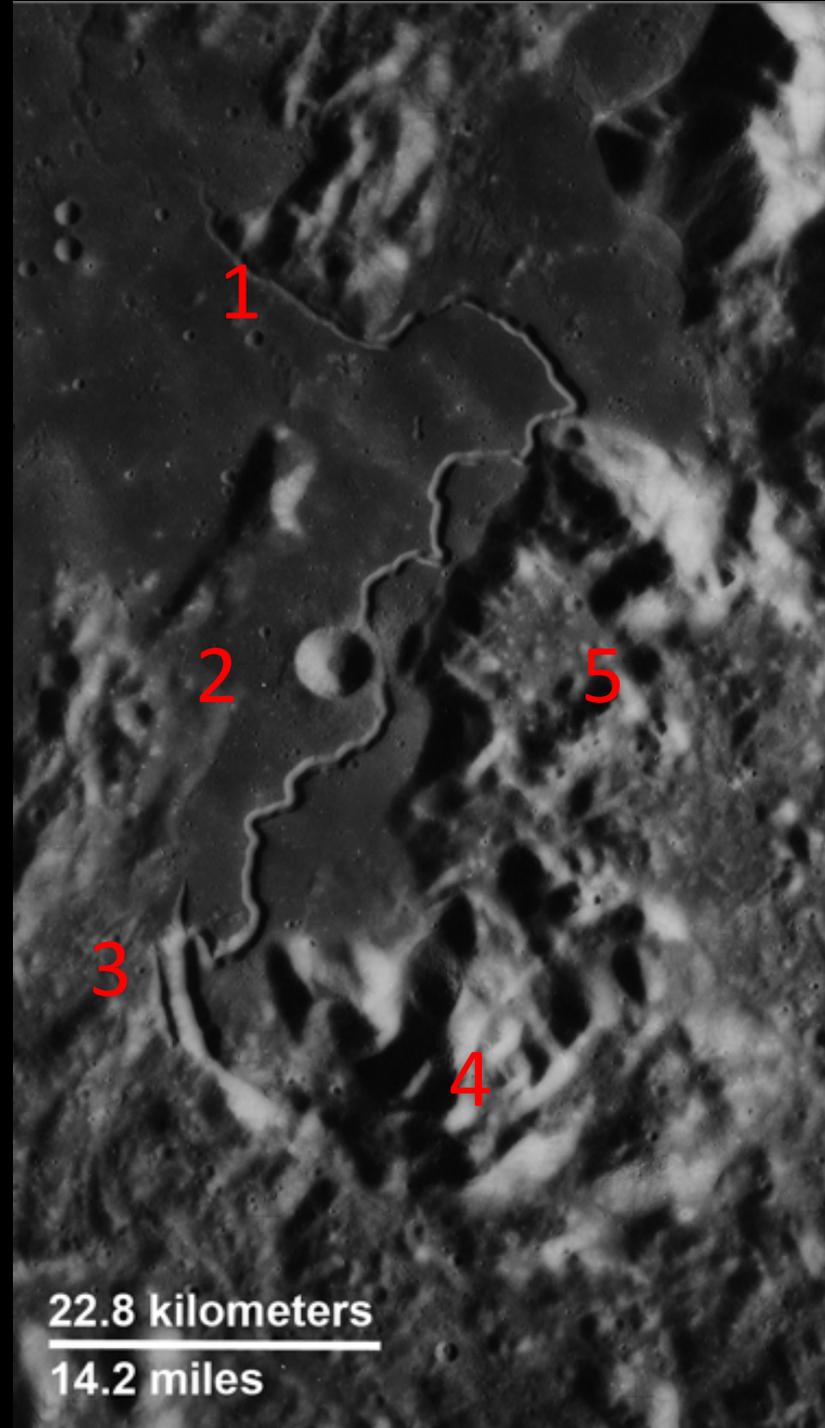


# Image Two Analysis

- 1. Two theories:
  - a. *Lava bed*—Shadowing indicates that feature has depth; would have formed while Moon still had significant tectonic and geologic activity. (younger than 3.8 bya)
  - b. *Canyon*—Formed due to extension stress; would have formed while Moon was cooling. (younger than 3.8 bya)
- 2. *Lava run-off*—Further supports theory 1a. Higher silicon content leads to less viscosity in lava.
- 3. *Impact craters*—mostly filled-in, implying older age.

*Conclusion: Image 2 is of near side of Moon. (?)*

# Image 3



1

2

5

3

4

22.8 kilometers  

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14.2 miles

# Image 3 Analysis

- 1. *Rille (sinuous)*—begins at dome volcano (2), extends both north and south, but becomes arcuate in southern direction.
- 2. *Dome volcano*—formed when Moon was still geologically active (< 3.8 bya); probably the oldest object in the image because every other item formed from it
- 3. *Arcuate rille*—formed when lava flow created a maria, contracted and sunk.
- 4. *Aluminum/Silicon Field*—indicates that this region formed during late bombardment (about 3.8 bya).
- 5. *Cones*—The shadows on these objects indicate that they are significantly tall. Likely composed of basalt.

*Conclusion: Image 3 is of near side of Moon.*