

catastrophically flooded across the surface, carving huge channels up to 100 kilometers wide, 1 kilometer deep, and thousands of kilometers long. The floods left long mesas and teardrop-shaped islands, such as those in Osuga Vallis. The floods emptied into the northern lowlands, possibly creating short-lived seas.



3,000,000,000 years ago

3,100,000,000 years ago

3,200,000,000 years ago

3,300,000,000 years ago

3,400,000,000 years ago



The Valles Marineris canyon system is over 10 kilometers deep in areas and stretches 4000 kilometers from end to end, about the sa distance from California to New York. This canyon began forming 3.0 billion years ago as heat from the interior caused the crust to stretch and break.

Oldest Terrestrial Impact Record

The oldest impact deposits on Earth are spherules of impact melt found in 3.47 billion year-old rocks within the Barberton Greenstone Belt of South Africa and the Pilbara block of Western Australia.



Lunar volcanism decreased significantly by 3.0 billion years ago and ceased completely by about 1.0 billion years ago as the interior of this small body cooled.



